Brain atlas of the Mongolian gerbil (Meriones unguiculatus) in CT/MRI-aided stereotaxic coordinates

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Abstract A new stereotaxic brain atlas of the Mongolian gerbil (Meriones unguiculatus), an important animal model in neurosciences, is presented. It combines high-quality histological material for identification of brain structures with reliable stereotaxic coordinates. The atlas consists of high-resolution images of frontal sections alternately stained for cell bodies (Nissl) and myelinated fibers (Gal-lyas) of 62 rostro-caudal levels at intervals of 350 µm. Brain structures were named according to the Paxinos nomenclature for rodents. The accuracy of the stereotaxic coordinate system was improved substantially by comparing and matching the series of histological sections to in vivo brain images of the gerbil obtained by magnetic resonance imaging (MRI). The skull outlines corresponding to the MR images were acquired using X-ray computerized tomography (CT) and were used to establish the relationship between coordinates of brain structures and skull. Landmarks such as lambda, bregma, ear canals and occipital crest can be used to line up skull and brain in standard atlas coordinates. An easily reproducible protocol allows sectioning of experimental brains in the standard frontal plane of the atlas.

Keywords Neuroanatomy · Rodent · Cytoarchitecture · Fiber architecture

Introduction

During the last decades, the Mongolian gerbil (Meriones unguiculatus, Thomas 1908) has emerged as an important animal model in neuroscience. It is a versatile and advantageous laboratory animal because of its robustness, its ease of handling and its reliable breeding under laboratory conditions.

Virtually all sensory systems, especially the auditory system, are being intensively studied in gerbils, involving a wide range of neuroanatomical and neurophysiological approaches. Topics include development and plasticity as well as effects of aging. Research in the motor system and investigations of behavioral mechanisms, learning and memory and of transmitter systems use gerbils as model organism as well. Due to a peculiarity of the cerebral arteries (circle of Willis) in Mongolian gerbils, cerebral infarction can be induced in a controllable way and has made it a widely used model for cerebral ischemia. It is also a model animal for inherited epilepsy, hippocampal seizure and pathogenesis of CNS infections.

Despite a large body of literature related to the investigation of the gerbil brain, the availability of brain atlases published for this animal species is limited. To date, there are two stereotaxic atlases of the gerbil’s brain. The ‘Stereotaxic Atlas of the Mongolian Gerbil Brain’ (Loskota...
Brain' by Thiessen and Yahr (1977) were frozen and cut in a cryostat, which causes only little shrinkage and thus more reliably reproduces stereotaxic coordinates. This atlas incorporates the earlier ‘Stereotaxic Atlas of the Hypothalamus’ by Thiessen and Goar (1970). The atlas presents only schematic outlines of structures and does not provide illustrative material of the underlying Nissl-stained histological sections. In addition, the sectioning plane deviates from the conventional frontal plane in rodents perpendicular to the axis of the brain stem in both atlases.

Thus, the need for a new stereotaxic atlas of the gerbil brain that combines high-quality histological material to identify brain structures with reliable stereotaxic coordinates is evident. Brain sections are inevitably subject to distortions during tissue fixation and subsequent histological procedures (embedding, sectioning, staining and section mounting). Here, we improved the accuracy of the stereotaxic coordinate system substantially by comparing and matching the series of histological sections to in vivo brain images of the gerbil obtained by magnetic resonance imaging (MRI). Moreover, X-ray computerized tomography (CT) yielded the outlines of the skull corresponding to the MR images, which helped to establish the relationship between coordinates of brain structures and skull coordinates. This is essential for any stereotaxic procedure using landmarks on the skull to reliably target brain structures for recording, imaging, tracer or virus applications. The atlas presents only schematic outlines of structures and does not contain the raw images as well as in DICOM format. The open source program AMIDE (amide.exe 1.0.4, Andreas Loening, http://amide.sourceforge.net/) was used to align CT and MR scans and to extract images shown in the atlas.

Animals were scanned under isoflurane anesthesia (1.0–1.5 % in 2:1 O2:N2O volume ratio) with the CT functionality of a NanoSPECT/CT scanner (Mediso Ltd., Budapest, Hungary). CT scans were made at 45 kVp, 1.77 μA, with 180 projections, 500 ms per projection and 96 μm pixel size. Images were reconstructed with the InVivoScope (vs.1.43) at isotropic voxel sizes of 100 μm and analyzed with the DICOM viewers Osirix (Pixmeo SARL, Bernex, Switzerland, v.5.1.7 64-bit) and the open source program AMIDE: A Medical Imaging Data Examiner (amide.exe 1.0.4, Andreas Loening, http://amide.sourceforge.net/; GNU GPL).

Animals were anesthetized with isoflurane (1.0–1.5 % in 1:1 O2:N2 volume ratio) and fixed with bite bars in a head-holder to reduce motion artifacts. MR scans were performed on a Bruker Biospec 47/20 scanner (Bruker Biospin GmbH, Rheinstetten, Germany) at 4.7 T (free bore of 20 cm) equipped with a BGA 09 (400 mT/m) gradient system. A 35 mm Litzcage small animal imaging system (DotyScientific Inc., Colombus, SC, USA) was used for radio frequency (RF) excitation and signal reception. Two days before MRI measurements, animals were injected subcutaneously with an aqueous solution containing 1 μmol/g MnCl2 (manganese enhanced MRI: ME-MRI). A data set of T1-weighted images was obtained using a 3D MDEFT (modified driven equilibrium Fourier transform) pulse sequence with the following parameters: repetition time 13.6 ms; echo time 4.3 ms; flip angle 20°; field of view 30 × 30 mm2; matrix 256 × 256 (yielding a nominal in plane resolution of 117 × 117 μm2); standard frontal orientation; slice thickness 350 μm; 20 averages. Images were reconstructed using Bruker ParaVision 4.0 (Bruker Biospin GmbH, Rheinstetten, Germany) and exported as raw images as well as in DICOM format. The open source program AMIDE (amide.exe 1.0.4, Andreas Loening, http://amide.sourceforge.net/) was used to align CT and MR scans and to extract images shown in the atlas.
Histology

Animals were anesthetized with a lethal dose of ketamine (40 mg/100 g body weight, i.p.) and xylazine (2 mg/100 g body weight, i.p.). When a deep anesthetic state marked by a complete loss of the flexor reflex at all limbs was reached, animals were perfused transcardially with 20 mL of phosphate buffered saline (0.1 M PBS, pH 7.4) supplemented with 0.1 % heparin followed by 200 mL of 4 % PFA (in 0.05 M PBS, pH 7.4). The brains were postfixed in the skull with 4 % PFA (in 0.05 M PBS, pH 7.4) at 4 °C for at least 7 days before removal to best preserve the brain shape.

Brains were cryo-protected in 22.5 % sucrose in PBS (0.05 M, pH 7.4) overnight and cut in a cryostat (LEICA CM 3050S) into four series of 40 μm thick frontal sections. The sections were directly mounted on gelatine-coated slides and dried overnight. Alternating section series were stained on-slide either for cells (Nissl) or for myelin (Gallyas 1979). The brains additionally processed for chemo- and immunoarchitecture were stained for cytochrome oxidase, acetylcholine-esterase (AChE), NADPH-diaphorase, calcium-binding proteins (parvalbumin, calbindin and calretinin) and neurofilament protein (SMI-32) in various combinations. Sections were imaged with a virtual slide microscope (VS120 S1, Olympus BX61VST, Olympus-Deutschland, Hamburg, Germany) at 10× magnification using the proprietary software dotSlide® (Olympus).

Atlas coordinate system

The coordinate system of the brain atlas is based on the conventional definition of anatomical sectioning planes in rodents. Frontal sections are perpendicular to the brainstem axis, which in the Mongolian gerbil is also parallel to the plane defined by the most dorsal points of cerebral and cerebellum (Fig. 1). This plane is therefore chosen as origin for the dorsoventral dimension with negative values in ventral direction. The lateral dimension is zeroed to the midsagittal plane with negative values towards the left side. The anterior to posterior coordinates of the atlas are given for different origins (bregma, lambda, interaural line and occipital crest as skull landmarks) and are valid for the skull in standard atlas orientation.

The frontal sectioning plane was implemented by a standardized embedding procedure using an acrylic glass box (Fig. 1). Each brain was oriented within the box so that the brainstem axis (Fig. 1bs) was parallel to the base of the box and the midsagittal plane lined up with the long axis of the box. Note that in this orientation the plane through the highest point of cerebellum and cerebrum (Fig. 1cc) is parallel to the base of the box and can therefore also be used to align the brain. The brain was stabilized in this orientation by adjustable supporting needles protruding from the bottom and from a bracket on top of the box. The volume around the brain was filled with embedding medium, namely a freshly prepared mixture of gelatin–albumin–glutaraldehyde. After 2–3 min, this mixture had hardened and the block was taken out of the box. Subsequently, the block was shock frozen in dry ice and mounted with its hind surface on the cutting platform of the cryostat. Due to the prior orientation within the box, the sectioning plane was now perpendicular to the long axis of the block and therefore also perpendicular to the brainstem axis and the horizontal plane through the highest cerebellar and cerebral points.

Stereotaxic reference system

In rats and mice, the connecting line through lambda and bregma coincides with that through lambda and occipital crest and is used as a horizontal guideline to align the in vivo brain in the classical planes (Paxinos and Watson...
In the Mongolian gerbil, the line linking lambda and bregma deviates from that linking lambda and occipital crest (Fig. 2, lower panel) and should, therefore, not be used as horizontal guideline to position the gerbil skull and brain in the atlas coordinate system. A horizontal adjustment of the skull along the line between lambda and occipital crest (Fig. 2, horizontal solid line) results in the best approximation to the atlas orientation (Fig. 2, dotted line) and is recommended as standard orientation.

Selection of atlas series

The atlas series of histological sections was selected according to the following criteria:

- the entire series, alternately stained for cell bodies (Nissl) and myelin (Gallyas), had to show good staining quality and tissue preservation
- the atlas series had to match the MR scan of an average-sized brain, and relative distances of indicative structures of the brain had to show congruency with the distances in the available MR scans.

The following structures that could clearly be determined both in histological sections and in MR slices were used as ‘indicative structures’ (Fig. 3): the rostral beginning of neocortex (1), the crossing of the anterior commissure (2), the distinct appearance of the medial habenular nucleus (3), the end of the superior colliculus concurrent with the middle of the inferior colliculus (4) and the end of the cerebellum (5). To judge brain size and to probe the consistency of individual histology series, the distances between indicative brain structures and the rostral pole of neocortex were evaluated and compared to the corresponding median distances in 13 MR scans (Fig. 3; Table 1).

The MR series that corresponded best to the median values was chosen as ‘ATLAS MRI’. The same distance measurements were performed in seven high-quality histological series. The series that corresponded best to the atlas MRI median values was designated as ‘ATLAS histology series’. Table 1 shows the conformance of the atlas histology series with the atlas MR scan and the median values of MRI series.

CT scans of the skull provide the interface to the brain coordinate system in vivo. Therefore, the available CT scans were overlaid to the atlas MRI. The CT scan matching best was chosen as ‘ATLAS CT’ series. For all CT scans the distances between bregma and the skull landmarks lambda, interaural line and occipital crest were calculated (Table 2). The comparison across animals corresponded well to the values of the atlas CT scan.

Preparation of images and plates

For each 350 μm thick slice of the atlas MR series a corresponding Nissl-stained section of the atlas series was selected and grouped with the adjacent myelin-stained section to represent one of the 62rostro-caudal levels (Fig. 4). Usually, every forth Nissl-stained section fitted best to the subsequent MR slice, which corresponded to a distance of 320 μm between the matching Nissl-stained sections. The 30 μm difference between the MR slices and the Nissl-stained sections can be explained by the shrinkage of the atlas brain due to histological processing, mainly fixation. This shrinkage is in the range of 8–10 % generally observed for cryo-protected frozen-cut brains with PFA fixation (4 %). Contrast and brightness of the images of the sections were corrected with Photoshop (CS6, Adobe Systems, San Jose, CA, USA), and distortions due to histological processing were compensated by slightly transforming the sections to optimize the congruency of anatomical structures between histological sections and MR images. Images were arranged in the atlas coordinate frame using CorelDraw graphics suite version X6 or X7 (Corel Corporation, Ottawa, ON, Canada). MR and CT
Fig. 3 Indicative structures in histological and MRI brain series. The following structures were used (from rostral to caudal): beginning of neocortex (1), midline crossing of anterior commissure (2), distinct appearance of medial habenular nucleus (3), end of the superior colliculus (concurrent with the middle of the inferior colliculus) and (4) end of the cerebellum (5). Montages combine CT and MR scans and half of the corresponding Nissl-stained section. The anterior–posterior location of the corresponding atlas plates is indicated by dotted lines and respective numbers in the central brain image.

Table 1 Distances between indicative structures in the atlas series

| Distance from beginning of neocortex to | ATLAS hist. series (mm) | ATLAS MRI (mm) | All MRI (N = 13) |
|----------------------------------------|-------------------------|----------------|------------------|
|                                        | Median (mm)             | Min/max (mm)   |                  |
| Middle of anterior commissure          | 5.95                    | 5.78           | 6                |
| Medial habenular nucleus               | 7.35                    | 7.35           | 7.35/7.7         |
| Middle of inferior colliculus          | 12.25                   | 12.08          | 12.15/12.78      |
| Posterior end of cerebellum            | 18.2                    | 18.03          | 18.03/18.73      |

Distances of indicative structures relative to the rostral beginning of the neocortex were determined in the histological atlas series (column: ATLAS hist. series), in the atlas MRI series (column: ATLAS MRI) and across MRI series (columns: all MRI). Median values and minimal and maximal values are from thirteen MRI scans.

Table 2 Distances between landmarks on the gerbil skull

| Distance between bregma and | ATLAS CT (mm) | All CT (N = 10) |
|----------------------------|---------------|----------------|
|                            | Median (mm)   | Min/max (mm)   |
| Lambda                     | 4.45          | 4.5            |
| Interaural line             | 7.25          | 7.25           |
| Occipital crest             | 9.98          | 9.95           |

Distances of skull landmarks lambda, interaural line and occipital crest are evaluated relative to bregma for the atlas CT scan (column: ATLAS CT) and as median distance values across all CT scans (columns: All CT). The range of values around the median is indicated by the minimum and maximum distance values taken from ten CT scans.
images were adjusted according to the definition of the atlas coordinate system in 62 plates and reflect the in vivo orientation of the brain and skull. The images of cell- and myelin-stained sections were inserted in line with the corresponding MR image. The anterior–posterior coordinates of the plates are indicated relative to bregma, lambda, interaural line and the occipital crest. All outlines were drawn in CorelDraw on the base of the Nissl-stained section of each atlas plate. The structural boundaries seen in the corresponding myelin-stained section generally correlate well with these outlines.

**Anatomical structures, nomenclature and abbreviations**

Anatomical structures were identified on the basis of cyto- and myeloarchitecture and their relative location. For comparison we mainly used the published atlases of the Mongolian gerbil brain (Loskota et al. 1974; Thiessen and Yahr 1977), the atlases and books for rat brain of Paxinos, Swanson and Zilles (Paxinos 1995, 2004; Paxinos and Watson 2007; Paxinos et al. 2009; Swanson 1992, 2004; Zilles 1985) and for mouse brain (Paxinos and Franklin 2001; Dong 2008; Franklin and Paxinos 2008; Watson and Paxinos 2010; Watson et al. 2012). Brain series stained for chemoarchitectonic markers were consulted to support the structural identification. Unfortunately, no unified neuroanatomical nomenclature exists to date (Swanson 2015). Therefore, we decided to use the widely accepted Paxinos nomenclature and abbreviations for naming structures. Auditory midbrain and brainstem nuclei for which gerbil specific terms were already established (Badinger et al. 2000, 2013; Mylius et al. 2013; Radtke-Schuller et al. 2015) were labeled according to these studies.

**Practical hints**

Sectioning in atlas coordinates: It is also possible to section the brain in the standard atlas plane without the above described embedding procedure. In this case, the brain is positioned upside down on a flat surface so that it is seated with the cerebellum and cerebrum on the base. Then, part of the brain is cut off perpendicular to the base to create a surface for mounting the brain’s portion of interest on the cryostat platform. By subsequent sectioning of the brain parallel to this cutting surface the resulting sections correspond best to the frontal plane of the atlas.

Stereotaxic procedure: In addition to traditional landmarks and reference points such as lambda, bregma and interaural line, we recommend the occipital crest (Fig. 2) for anterior–posterior reference and adjustment of the skull in vivo. The traditional landmarks are often difficult to discern, show individual variations and cannot be accessed in some experimental approaches (e.g., interaural coordinates in auditory research where ear bars are avoided). In general, a higher precision of in vivo positioning of the skull can be achieved by using the specific pattern of skull profiles instead of single reference points [for profile oriented stereotaxic procedure see Schuller et al. (1986)].
**Index of Structures**

The structures are listed in alphabetical order followed by their abbreviation and the plate number(s) of occurrence.

| Structure                                                                 | Plate(s) |
|--------------------------------------------------------------------------|----------|
| 1st cerebellar lobule (lingula)                                          | 1Cb 46–48|
| 2nd cerebellar lobule                                                   | 2Cb 43–46|
| 3rd cerebellar lobule                                                   | 3Cb 43–49|
| 3rd ventricle                                                            | 3V 23–34 |
| 4th cerebellar lobule                                                   | 4Cb 41–49|
| 4th ventricle                                                            | 4V 43–54 |
| 5th cerebellar lobule                                                   | 5Cb 42–50|
| 6th cerebellar lobule                                                   | 6Cb 46–54|
| 7th cerebellar lobule                                                   | 7Cb 51–56|
| 8th cerebellar lobule                                                   | 8Cb 51–58|
| 9th cerebellar lobule                                                   | 9Cb 50–51|
| 9th cerebellar lobule, a                                                | 9aCb 52–59|
| 9th cerebellar lobule, b                                                | 9bCb 52–59|
| 9th cerebellar lobule, c                                                | 9cCb 52–59|
| 10th cerebellar lobule (nodule)                                         | 10Cb 50–55|
| A                                                                        |          |
| A11 dopamine cells                                                       | A11 30–31|
| A13 dopamine cells                                                       | A13 28–29|
| A5 noradrenaline cells                                                  | A5 44–47 |
| abducens nerve                                                           | 6n 46–47 |
| abducens nucleus                                                         | 6N 47    |
| accessory nerve nucleus                                                  | 11N 60–62|
| accessory neurosecretory nuclei                                         | ANS 27–28|
| accumbens nucleus, core                                                 | AcbC 16–21|
| accumbens nucleus, shell                                                | AcbSh 16–21|
| agranular insular cortex                                                | AI 11–27 |
| alveus of the hippocampus                                               | alv 27–38|
| ambiguous nucleus, compact part                                          | AmbC 52  |
| ambiguous nucleus, loose part                                           | AmbL 55  |
| ambiguous nucleus, subcompact part                                       | AmbSC 53–54|
| amygdalohippocampal area                                                | AHi 29–33|
| amygdaloid fissure                                                      | af 31–32 |
| amygdaloid intramedullary gray                                          | IMG 27–28|
| amygdalopiriform transition area                                        | APir 30–35|
| amygdalostriatal transition area                                        | ASi 26–30|
| angular thalamic nucleus                                                | AngT 28–28|
| ansoparamedian fissure                                                  | apmf 52–55|
| anterior amygdaloid area                                                | AA 24–26 |
| anterior auditory field                                                 | AAF 28–29|
| anterior cerebral artery                                                | acer 23  |
| anterior commissure, anterior part                                       | aca 11–24|
| anterior commissure, intrabulbar part                                   | aci 1–10 |
| anterior commissure, posterior part                                      | acp 23–25|
| anterior cortical amygdaloid nucleus                                    | ACo 24–28|
| anterior hypothalamic area, anterior part                               | AHA 25–26|
| anterior hypothalamic area, central part                                 | AHC 27–28|
| anterior hypothalamic area, posterior part                              | AHP 28   |
| anterior olfactory nucleus, dorsal part                                  | AOD 8–12 |
| anterior olfactory nucleus, external part                               | AOE 6–10 |
| anterior olfactory nucleus, lateral part                                | AOL 6–12 |
| anterior olfactory nucleus, medial part                                 | AOM 9–13 |
| anterior olfactory nucleus, posterior part                              | AOP 14–16|
| anterior olfactory nucleus, ventral part                                | AOV 8–11 |
| anterior olfactory nucleus, ventroposterior part                       | AOVP 11–15|
| anterior pretectal nucleus                                              | APT 35   |
| anterior pretectal nucleus, dorsal part                                 | APTD 31–34|
| anterior pretectal nucleus, ventral part                                | APTV 32–34|
| anterior tegmental nucleus                                              | ATg 40–41|
| anterodorsal thalamic nucleus                                           | AD 26–27 |
| anterolateral periolivary nucleus                                       | ALPO 44  |
| anteromedial thalamic nucleus                                           | AM 25–28 |
| anteromesial thalamic nucleus                                           | AMV 27   |
| anterovent thalamic nucleus, dorsomedial part                           | AVDM 26–28|
| anteroventral periventricular nucleus                                   | AVPe 23  |
| anteroventral thalamic nucleus                                          | AV 25    |
| anteroventral thalamic nucleus, ventrolateral part                      | AVVL 26–27|
| asc7                                                                      | 48       |
| B                                                                        |          |
| Barrington’s nucleus                                                    | Bar 43–44|
| basal nucleus (Meynert)                                                 | B 24–29  |
| basolateral amygdaloid nucleus, anterior part                           | BLA 25–29|
| basolateral amygdaloid nucleus, posterior part                          | BLP 27–32|
| basolateral amygdaloid nucleus, ventral part                           | BLV 25–27|
| basomedial amygdaloid nucleus, anterior part                            | BMA 25–27|
| basomedial amygdaloid nucleus, posterior part                           | BMP 28–31|
| bed nucleus of stria terminalis, fusiform part                          | Fu 23    |
| bed nucleus of the accessory olfactory tract                            | BAOT 27  |
| bed nucleus of the anterior commissure                                  | BAC 24   |
| bed nucleus of the stria terminalis                                     | ST 22    |
| bed nucleus of the stria terminalis, intraamygdaloid division           | STIA 28–29|
| bed nucleus of the stria terminalis, lateral division, intermediate part| STLI 24  |
| bed nucleus of the stria terminalis, lateral division, posterior part   | STLP 23–24|
| bed nucleus of the stria terminalis, lateral division, ventral part     | STLV 23–24|
| bed nucleus of the stria terminalis, medial division, anterior part     | STMA 23–24|
| bed nucleus of the stria terminalis, medial division, posterior part    | STMP 25–26|
| bed nucleus of the stria terminalis, medial division, ventral part      | STMV 23–24|
| blood vessel                                                             | BV 21    |
| Bötzingner complex                                                      | Bo 52    |
| Anatomical Structure                                      | Abbreviation | Range |
|----------------------------------------------------------|--------------|-------|
| Brachium of the inferior colliculus                       | bic          | 36–40 |
| Brachium of the superior colliculus                        | bsc          | 33–35 |
| Caudal linear nucleus of the raphe                         | CLI          | 37–39 |
| Caudal periolivary nucleus                                  | CPO          | 48    |
| Caudate putamen (striatum)                                 | CPu          | 17–30 |
| Caudomedial entothinal cortex                               | CEnt         | 35–41 |
| Caudoventrolateral reticular nucleus                       | CVL          | 52–53 |
| Cell bridges of the ventral striatum                        | CB           | 20–22 |
| Central amygdaloid nucleus, capsular part                  | CeC          | 26–29 |
| Central amygdaloid nucleus, lateral division               | CeL          | 27–28 |
| Central amygdaloid nucleus, medial division                | CeM          | 25–29 |
| Central canal                                              | CC           | 55–62 |
| Central cervical nucleus of the spinal cord                 | CeCv         | 56–62 |
| Central gray                                               | CG           | 43    |
| Central gray of the pons                                    | CGPn         | 45    |
| Central gray, alpha part                                   | CGA          | 44–46 |
| Central gray, beta part                                    | CGB          | 44–45 |
| Central gray, gamma part                                   | CGG          | 46    |
| Central gray, nucleus O                                    | CGO          | 44–45 |
| Central medial thalamic nucleus                             | CM           | 26–31 |
| Central nucleus of the inferior colliculus                 | CIC          | 39–42 |
| Centrolateral thalamic nucleus                              | CL           | 28–31 |
| Cerebellar white matter                                    | cbw          | 43–57 |
| Cerebral peduncle                                          | cp           | 28–39 |
| Choroid plexus                                             | chp          | 24–54 |
| Cingulate cortex, area 1                                   | Cg1          | 10–27 |
| Cingulate cortex, area 2                                   | Cg2          | 19–27 |
| Cingulum                                                   | cg           | 17–34 |
| Claustrum                                                  | Cl           | 12–27 |
| Commissural stria terminalis                               | cst          | 26–27 |
| Commissure of the inferior colliculus                       | cic          | 42–43 |
| Commissure of the lateral lemniscus                        | cll          | 41–42 |
| Commissure of the superior colliculus                      | csc          | 34–36 |
| Copula of the pyramis                                      | Cop          | 49–57 |
| Corpus callosum                                            | cc           | 20–30 |
| Cortex-amygdala transition zone                            | CxA          | 24–26 |
| Crus 1 of the ansiform lobule                              | Crus1        | 43–54 |
| Crus 2 of the ansiform lobule                              | Crus2        | 49–55 |
| Cuneate fasciculus                                         | cu           | 53–62 |
| Cuneate nucleus                                            | Cu           | 52–62 |
| Cuneate nucleus, rotundus part                             | CuR          | 55–56 |
| Cuneiform nucleus                                          | CnF          | 41–43 |
| Decussation of the superior cerebellar peduncle            | xscp         | 39–41 |
| Decussation of the trapezoid body                           | tzx          | 44–47 |
| Deep cerebral white matter                                 | dcw          | 29–39 |
| Deep gray layer of the superior colliculus                 | DpG          | 33–41 |
| Deep white layer of the superior colliculus                | DpWh         | 34–41 |
| Dentate gyrus                                              | DG           | 30    |
| Dorsal acoustic stria                                       | das          | 49–50 |
| Dorsal cochlear nucleus, deep core                         | DCDp         | 49–50 |
| Dorsal cochlear nucleus, fusiform layer                    | DCFu         | 48–50 |
| Dorsal cochlear nucleus, molecular layer                   | DCMo         | 48–50 |
| Dorsal cortex of the inferior colliculus                    | DCIC         | 40–43 |
| Dorsal corticospinal tract                                  | dcs          | 60–62 |
| Dorsal endopiriform nucleus                                | DEn          | 12–32 |
| Dorsal fornix                                               | df           | 26–27 |
| Dorsal hippocampal commissure                              | dhc          | 28–38 |
| Dorsal hypothalamic area                                   | DA           | 29–30 |
| Dorsal lateral geniculate nucleus                          | DLG          | 29–33 |
| Dorsal lateral olfactory tract                              | dlo          | 5–12  |
| Dorsal motor nucleus of vagus                              | 10N          | 53–58 |
| Dorsal nuclei of the lateral lemniscus                     | DNLL         | 41–42 |
| Dorsal paragigantocellular nucleus                         | DPGi         | 48–51 |
| Dorsal part of claustrum                                   | DCI          | 16–26 |
| Dorsal peduncular cortex                                   | DP           | 12–18 |
| Dorsal pedireillary nucleus                                | DPO          | 45–47 |
| Dorsal raphe nucleus                                       | DR           | 37–38 |
| Dorsal raphe nucleus, caudal part                          | DRC          | 43–44 |
| Dorsal raphe nucleus, dorsal part                          | DRD          | 39–42 |
| Dorsal raphe nucleus, lateral part                         | DRL          | 39–41 |
| Dorsal raphe nucleus, ventral part                         | DRV          | 39–42 |
| Dorsal spino cerebellar tract                              | dsc          | 52–62 |
| Dorsal subiculum                                           | DS           | 33–36 |
| Dorsal tegmental decussation                               | dtgx         | 36–37 |
| Dorsal tegmental nucleus, central part                     | DTgC         | 43    |
| Dorsal tegmental nucleus, pericentral part                 | DTgP         | 43    |
| Dorsal tenia tecta                                         | DTT          | 11–18 |
| Dorsal transition zone                                     | Dtr          | 12–15 |
| Dorsolateral orbital cortex                                | DLO          | 9–12  |
| Dorsolateral periaqueductal gray                           | DLPG         | 36–42 |
| Dorsolateral periventricular nucleus                       | DLPO         | 44–47 |
| Dorsomedial hypothalamic nucleus                           | DM           | 29–32 |
| Dorsomedial hypothalamic nucleus, compact part             | DMC          | 31    |
| Dorsomedial hypothalamic nucleus, dorsal part              | DMD          | 31    |
| Dorsomedial hypothalamic nucleus, ventral part             | DMV          | 31    |
| Dorsomedial nucleus of the inferior colliculus             | DMIC         | 41–43 |
| Dorsomedial periaqueductal gray                            | DMPAG        | 35–42 |
| Dorsomedial spinal trigeminal nucleus                      | DMSp5        | 48–54 |
| Dorsomedial tegmental area                                  | DMTg         | 43–45 |
| Dysgranular insular cortex                                  | DI           | 13–27 |
| Ectoral cortex                                             | Ect          | 28–42 |
| Edinger–Westphal nucleus                                   | EW           | 36–38 |
| Entopeduncular nucleus                                     | EP           | 27–28 |
| Entorhinal cortex                                          | Ent          | 42    |
| Structure | Abbreviation | Number |
|-----------|--------------|--------|
| Ependyama and subependymal layer | E | 1–23 |
| Ethmoid thalamic nucleus | Eth | 32 |
| External capsule | ec | 19–30 |
| External cortex of the inferior colliculus | ECIC | 38–44 |
| External cuneate nucleus | ECu | 52–56 |
| External medullary lamina | eml | 28–30 |
| External plexiform layer of the accessory olfactory bulb | EPIA | 5–9 |
| External plexiform layer of the olfactory bulb | EPI | 1–9 |
| F | F | |
| F cell group of the vestibular complex | FVe | 52 |
| Facial nerve | 7n | 45–47 |
| Facial nucleus, dorsal intermediate subnucleus | 7DI | 48–50 |
| Facial nucleus, dorsolateral subnucleus | 7DL | 48–50 |
| Facial nucleus, dorso-medial subnucleus | 7DM | 48–50 |
| Facial nucleus, lateral subnucleus | 7L | 49–51 |
| Facial nucleus, ventral intermediate subnucleus | 7VI | 48–50 |
| Facial nucleus, ventromedial subnucleus | 7VM | 48–50 |
| Fasciculus retroflexus | fr | 27–36 |
| Fasciola cinereum | FC | 29–33 |
| Field CA1 of the hippocampus | CA1 | 28–36 |
| Field CA2 of the hippocampus | CA2 | 28–32 |
| Field CA3 of the hippocampus | CA3 | 27–34 |
| Fimbria of the hippocampus | fi | 22–30 |
| Flocculus | Fl | 43–48 |
| Forceps major of the corpus callosum | fmj | 34–39 |
| Forceps minor of the corpus callosum | fmi | 13–18 |
| Fornix | f | 23–32 |
| Frontal association cortex | FrA | 7–9 |
| Frontal cortex, area 3 | Fr3 | 11–17 |
| G | G | |
| Gelatinous layer of the caudal spinal trigeminal nucleus | Ge5 | 57–62 |
| Genu of the corpus callosum | gcc | 19 |
| Genu of the facial nerve | g7 | 46–48 |
| Giantocellular reticular nucleus | Gi | 47–54 |
| Giantocellular reticular nucleus, alpha part | GiA | 48–51 |
| Giantocellular reticular nucleus, ventral part | GiV | 51–52 |
| Globular cell area, ventral cochlear nucleus | Gca | 46–49 |
| Globus pallidus | GP | 24–29 |
| Glomeral layer of the accessory olfactory bulb | GLA | 5–10 |
| Glomeral layer of the olfactory bulb | GI | 1–11 |
| Glossopharyngeal nerve nucleus | 9N | 62 |
| Gracile fasciculus | gr | 54–62 |
| Gracile nucleus | Gr | 54–62 |
| Granular cell layer of the olfactory bulb | Gro | 1–10 |
| Granular insular cortex | GI | 13–27 |
| Granular layer of the dentate gyrus | GrDG | 27–36 |
| Granule cell layer of cochlear nuclei | GrC | 43–50 |
| Granule cell layer of the accessory olfactory bulb | GRA | 3–10 |
| H | H | |
| Habenular commissure | hbc | 31–32 |
| Hippocampal fissure | hif | 30–34 |
| Hypoglossal nerve | 12n | 53–58 |
| Hypoglossal nucleus | 12N | 51–58 |
| Hypoglossal nucleus, geniohyoid part | 12GH | 57–58 |
| I | I | |
| Indusium griseum | IG | 18–33 |
| Inferior cerebellar peduncle (restiform body) | icp | 46–53 |
| Inferior olive, beta subnucleus | IOBe | 56–58 |
| Inferior olive, cap of Kooy of the medial nucleus | IOK | 56–57 |
| Inferior olive, dorsal nucleus | IOD | 52–56 |
| Inferior olive, dorsomedial cell group | IODM | 52–55 |
| Inferior olive, medial nucleus | IOM | 52–55 |
| Inferior olive, principal nucleus | IOPr | 52–56 |
| Inferior olive, subnucleus A of medial nucleus | IOA | 57–58 |
| Inferior olive, subnucleus B of medial nucleus | IOB | 56–58 |
| Inferior olive, subnucleus C of medial nucleus | IOC | 56–58 |
| Inferomedial cortex | IL | 14–18 |
| Interanterodorsal thalamic nucleus | IAD | 26–27 |
| Interanteromedial thalamic nucleus | IAM | 27 |
| Intercalated amygdaloid nucleus, main part | IM | 26 |
| Intercalated nuclei of the amygdala | I | 23–29 |
| Intercrural fissure | icf | 49–54 |
| Interfascicular nucleus | IF | 35–38 |
| Intermediate endopiriform nucleus | IEn | 12–24 |
| Intermediate gray layer of the superior colliculus | InG | 33–41 |
| Intermediate nucleus of the lateral lemniscus | INLL | 40–42 |
| Intermediate reticular nucleus | IRt | 46–62 |
| Intermediate white layer of the superior colliculus | InWh | 33–41 |
| Intermediodorsal thalamic nucleus | IMD | 28–30 |
| Intermedioventral thalamic commissure | imvc | 29–30 |
| Internal capsule | ic | 23–30 |
| Internal medullary lamina | imm | 26 |
| Internal plexiform layer of the olfactory bulb | IPI | 1–10 |
| Interpeduncular fossa | IPF | 36 |
| Interpeduncular nucleus, caudal subnucleus | IPC | 37–40 |
| Interpeduncular nucleus, dorsal subnucleus | IPD | 38 |
| Interpeduncular nucleus, intermediate subnucleus | IPI | 38–39 |
| Interpeduncular nucleus, lateral subnucleus | IPL | 37–39 |
| Interpeduncular nucleus, rostral subnucleus | IPR | 37–38 |
| Interposed cerebellar nucleus, anterior part | IntA | 47–49 |
| Interposed cerebellar nucleus, dorsolateral hump | IntDL | 47–50 |
| Interposed cerebellar nucleus, dorsomedial crest | IntDM | 48–50 |
| Interposed cerebellar nucleus, posterior part | IntP | 49–50 |
| Interposed cerebellar nucleus, posterior parvicular part | IntPPC | 49–50 |
| Interstitial nucleus of Cajal | InC | 33–38 |
| Anatomy | Abbreviation | Coordinates |
|--------|-------------|-------------|
| interstitial nucleus of the medulla | IB | 57–62 |
| interstitial nucleus of the posterior limb of the anterior commissure | IPAC | 22–25 |
| interventricular foramen | IVF | 25– |
| islands of Calleja | ICj | 16–22 |
| islands of Calleja, major island | ICjM | 20–21 |
| isthmic reticular formation | isRt | 39–42 |
| Kölliker–Fuse nucleus | KF | 43–44 |
| lacunosum moleculare layer of the hippocampus | LMol | 29–36 |
| lamboyd septal zone | Ld | 19–21 |
| lateral accumbens shell | LAcbSh | 19–21 |
| lateral amygdaloid nucleus | La | 26–31 |
| lateral amygdaloid nucleus, dorsal part | LaD | 27–30 |
| lateral amygdaloid nucleus, ventral part | LaV | 27–30 |
| lateral (dentate) cerebellar nucleus | Lat | 46–49 |
| lateral cerebellar nucleus, parvicellular part | LatPC | 46–48 |
| lateral entorhinal cortex | LEnt | 29–41 |
| lateral habenular nucleus | LHB | 28–31 |
| lateral habenular nucleus, lateral part | LHBs | 29–30 |
| lateral habenular nucleus, medial part | LHBM | 29–30 |
| lateral lemniscus | LII | 39–43 |
| lateral mammillary nucleus | LM | 33–35 |
| lateral nucleus of the trapezoid body | LNTB | 44–47 |
| lateral olfactory tract | lo | 5–25 |
| lateral orbital cortex | LO | 8–16 |
| lateral parabrachial nucleus | LPB | 45 |
| lateral parabrachial nucleus, central part | LPBC | 43–44 |
| lateral parabrachial nucleus, crescent part | LPBCr | 44 |
| lateral parabrachial nucleus, internal part | LPBI | 43–45 |
| lateral paragigantocellular nucleus | LPGi | 51–53 |
| lateral paragigantocellular nucleus, alpha part | LPGiA | 48–50 |
| lateral paragigantocellular nucleus, external part | LPGiE | 48–50 |
| lateral parietal association cortex | LPa | 28–30 |
| lateral periaqueductal gray | LPAG | 35–42 |
| lateral posterior thalamic nucleus, laterocaudal part | LPLC | 32–33 |
| lateral posterior thalamic nucleus, laterorostral part | LPLR | 29–31 |
| lateral posterior thalamic nucleus, mediocaudal part | LPMC | 32–34 |
| lateral posterior thalamic nucleus, mediorostral part | LPMR | 29–32 |
| lateral preoptic area | LPO | 22–25 |
| lateral recess of the 4th ventricle | LR4V | 45–51 |
| lateral reticular nucleus | LRT | 54–59 |
| lateral reticular nucleus, parvicellular part | LRTPC | 56–58 |
| lateral reticular nucleus, subtrigeminal part | LRTSS | 55–56 |
| lateral septal nucleus, dorsal part | LSD | 19–25 |
| lateral septal nucleus, intermediate part | LSI | 18–23 |
| lateral septal nucleus, ventral part | LSV | 19–23 |
| lateral stripe of the striatum | LSS | 21–23 |
| lateral superior olive | LSO | 45–47 |
| lateral terminal nucleus of the accessory optic tract | LT | 33 |
| lateral ventricle | LV | 17–32 |
| lateral vestibular nucleus | LVe | 47–49 |
| lateroanterior hypothalamic nucleus | LA | 25–26 |
| laterodorsal thalamic nucleus | LDTg | 42–44 |
| laterodorsal thalamic nucleus, ventral part | LDTgV | 43 |
| laterodorsal thalamic nucleus, dorsomedial part | LDDM | 27–28 |
| laterodorsal thalamic nucleus, ventrolateral part | LDVL | 27–29 |
| lateroventral periolivary nucleus | LVPO | 44–47 |
| layer 1 of cortex | L1 | 1–11 |
| layer 2 of cortex | L2 | 2–11 |
| layer 3 of cortex | L3 | 3–11 |
| layer 4 of cortex | L4 | 4–14 |
| lemnina terminals | LTe | 24 |
| linear nucleus of the medulla | Li | 51–53 |
| lithoid nucleus | Lth | 33 |
| locus coeruleus | LC | 44–45 |
| longitudinal fasciculus of the pons | Lfp | 40–43 |
| magnocellular nucleus of the lateral hypothalamus | MCLH | 29 |
| magnocellular nucleus of the posterior commissure | MCPC | 33–34 |
| magnocellular preopticus nucleus | MCPO | 23–25 |
| mammillary peduncle | mp | 35–36 |
| mammillary recess of the 3rd ventricle | MRe | 34 |
| mammillotegmental tract | mtg | 33 |
| mammillothalamus tract | mt | 27–33 |
| marginal zone of the medial geniculate | MZMG | 33–35 |
| matrix region of the medulla | Mx | 50–59 |
| medial (fastigial) cerebellar nucleus | Med | 47–50 |
| medial accessory oculomotor nucleus | MA3 | 34–35 |
| medial amygdaloid nucleus, anterodorsal part | MeAD | 26–27 |
| medial amygdaloid nucleus, anteroventral part | MeAV | 27 |
| medial amygdaloid nucleus, posterodorsal part | MePD | 27–29 |
| medial amygdaloid nucleus, posteroventral part | MePV | 28–29 |
| medial cerebellar nucleus, dorsolateral protuberance | MedDL | 49–50 |
| medial cerebellar nucleus, lateral part | MedL | 49–50 |
| medial corticohypothalamic tract | mch | 25 |
| medial entorhinal cortex | MEnt | 34–41 |
| medial forebrain bundle | mfb | 19–32 |
| medial geniculate nucleus, dorsal part | MGD | 33–36 |
| medial geniculate nucleus, medial part | MGM | 33–36 |
| medial geniculate nucleus, ventral part | MGV | 33–36 |
| medial habenular nucleus | MHb | 27–31 |
| Structure                                                                 | Acronym | Coordinates |
|--------------------------------------------------------------------------|---------|-------------|
| medial lemniscus                                                         | ml      | 28–54       |
| medial lemniscal decussation                                             | mlx     | 56          |
| medial longitudinal fasciculus                                           | mlf     | 37–62       |
| medial mammillary nucleus, lateral part                                   | ML      | 34–36       |
| medial mammillary nucleus, medial part                                   | MM      | 34–35       |
| medial mammillary nucleus, median part                                   | MnM     | 34–         |
| medial nucleus of the trapezoid body                                      | MNTB    | 43–47       |
| medial orbital cortex                                                     | MO      | 8–14        |
| medial parabrachial nucleus                                              | MPB     | 43–45       |
| medial parabrachial nucleus, external part                               | MPBE    | 44          |
| medial parietal association cortex                                        | MPTA    | 28–30       |
| medial preoptic area                                                      | MPA     | 22–25       |
| medial preoptic nucleus                                                  | MPO     | 24–25       |
| medial pretectal nucleus                                                 | MPT     | 32          |
| medial septal nucleus                                                    | MS      | 19–23       |
| medial superior olive                                                    | MSO     | 44–47       |
| medial terminal nucleus of the accessory optic tract                     | MT      | 35          |
| medial tuberal nucleus                                                   | MTTa    | 29–31       |
| medial vestibular nucleus                                                | MVe     | 53          |
| medial vestibular nucleus, magnocellular part                            | MVeMC   | 46–52       |
| medial vestibular nucleus, parvicellular part                            | MVePC   | 46–52       |
| median accessory nucleus of the medulla                                  | MnA     | 59–62       |
| median eminence                                                          | ME      | 30–32       |
| median preoptic nucleus                                                  | MnPO    | 22–24       |
| median raphe nucleus                                                     | MnR     | 39–43       |
| mediodorsal thalamic nucleus                                             | MD      | 27          |
| mediodorsal thalamic nucleus, central part                               | MDC     | 28–30       |
| mediodorsal thalamic nucleus, lateral part                               | MDL     | 28–30       |
| mediodorsal thalamic nucleus, medial part                                | MDM     | 28–30       |
| medioventral periolivary nucleus                                         | MVPO    | 44–47       |
| medullary reticular nucleus, dorsal part                                 | MdD     | 55–62       |
| medullary reticular nucleus, ventral part                                | MdV     | 55–62       |
| mesencephalic reticular formation                                        | mRt     | 36–38       |
| mesencephalic trigeminal nucleus                                         | Me5     | 38–45       |
| mesencephalic trigeminal tract                                           | me5     | 43–45       |
| microcellular tegmental nucleus                                          | MiTg    | 38–39       |
| middle cerebellar peduncle                                               | mcp     | 40–46       |
| middle cerebral artery                                                   | mcer    | 23          |
| mitral cell layer of the accessory olfactory bulb                        | MiA     | 5–9         |
| mitral cell layer of the olfactory bulb                                  | Mi      | 1–10        |
| molecular layer of the dentate gyrus                                     | MoDG    | 27–37       |
| molecular layer of the subiculum                                         | MoS     | 37          |
| motor root of the trigeminal nerve                                       | m5      | 43–45       |
| motor trigeminal nucleus                                                 | 5N      | 44–45       |
| motor trigeminal nucleus, anterior digastic part                         | 5ADi    | 45–46       |
| motor trigeminal nucleus, tensor tympani part                            | 5TT     | 43–44       |
| navicular nucleus of the basal forebrain                                 | Nv      | 17–18       |
| nigrostriatal bundle                                                     | ns      | 27–33       |
| nucleus of Darkschewitsch                                                | Dk      | 33–35       |
| nucleus of origin of efferents of the vestibular nerve                   | EVE     | 47          |
| nucleus of Roller                                                       | Ro      | 52–56       |
| nucleus of the brachium of the inferior colliculus                       | BIC     | 36–37       |
| nucleus of the central acoustic tract                                    | CAT     | 43–         |
| nucleus of the fields of Forel                                           | F       | 32–34       |
| nucleus of the horizontal limb of the diagonal band                      | HDB     | 20–25       |
| nucleus of the lateral olfactory tract                                   | LOT     | 25–26       |
| nucleus of the optic tract                                               | OT      | 32–35       |
| nucleus of the posterior commissure                                      | PCom    | 33–34       |
| nucleus of the solitary tract                                            | Sol     | 49–50       |
| nucleus of the solitary tract, commissural part                          | SolC    | 55–62       |
| nucleus of the solitary tract, medial part                               | SolM    | 55–59       |
| nucleus of the solitary tract, ventrolateral part                        | SolVL   | 55–57       |
| nucleus of the vertical limb of the diagonal band                        | VDB     | 19–21       |
| nucleus X                                                                | X       | 48–52       |
| nucleus Y                                                                | Y       | 48          |
| obex                                                                     | Obex    | 57          |
| octopus cell area, ventral cochlear nucleus                             | Oca     | 47–49       |
| oculomotor nerve                                                         | 3n      | 36–37       |
| oculomotor nucleus                                                       | 3N      | 37–38       |
| oculomotor nucleus, parvicellular part                                   | 3PC     | 36          |
| olfactory nerve layer                                                    | ON      | 1–8         |
| olfactory tubercle                                                       | Tu      | 16–23       |
| olfactory ventricle (olfactory part of lateral ventricle)                | OV      | 1–16        |
| olivary pretectal nucleus                                               | OPT     | 32–33       |
| olivocerebellar tract                                                   | oc      | 50–54       |
| olivocochlear bundle                                                    | ocB     | 46–47       |
| optic chiasm                                                             | och     | 21–25       |
| optic nerve layer of the superior colliculus                             | Op      | 33–40       |
| optic tract                                                              | opt     | 26–33       |
| oriens layer of the hippocampus                                          | Or      | 27–36       |
| oval paracentral thalamic nucleus                                        | OPC     | 29–31       |
| p1 periaqueductal gray                                                  | p1PAG   | 32–34       |
| p1 reticular formation                                                  | p1Rt    | 32–35       |
| paraabducens nucleus                                                    | Pa6     | 46–47       |
| parabigeminal nucleus                                                   | PBG     | 38–40       |
| parabrachial pigmented nucleus of the ventral tegmental area            | PBP     | 33–37       |
| paracentral thalamic nucleus                                            | PC      | 27–30       |
| paracochlear glial substance                                            | PCGS    | 46          |
| parafascicular thalamic nucleus                                         | PF      | 31–32       |
| parafocal sulcus                                                        | Pfs     | 44–50       |
| parafolliculus                                                          | PF1     | 43–50       |
| parainterfascicular nucleus of the ventral tegmental area               | PIF     | 36–37       |
| Anatomical Region | Abbreviation | Coordinates |
|-------------------|--------------|-------------|
| paralemniscal nucleus | PL | 40–42 |
| paralemniscal nucleus, medial part | MPL | 41–42 |
| paramedian lobule | PM | 49–56 |
| paramedian raphe nucleus | PMnR | 39–42 |
| paramedian sulcus | Pms | 50–55 |
| paranginal nucleus of the ventral tegmental area | PN | 36–37 |
| parapalynusal nucleus | PPy | 49–50 |
| pararubral nucleus | PR | 35–38 |
| parasolitary nucleus | PSol | 54–55 |
| parastrial nucleus | PS | 23–24 |
| parasubiculum | PSi | 35–42 |
| parasubthalamic nucleus | PSTh | 32 |
| paratemporal thalamic nucleus | PT | 25–27 |
| paraterete nucleus | PTe | 29–30 |
| paratrochlear nucleus | Pa5 | 54–57 |
| paramedian raphe nucleus | Pa4 | 40–41 |
| paramedian lobule | PMnR | 39–42 |
| paramedian raphe nucleus, ventral part | PaAP | 25–26 |
| paraventricular hypothalamic nucleus, medial magnocellular part | PaMM | 27–28 |
| paraventricular hypothalamic nucleus, medial parvicellular part | PaMP | 27 |
| paraventricular hypothalamic nucleus, posterior part | PaPo | 28 |
| paraventricular hypothalamic nucleus, ventral part | PaV | 27 |
| paraventricular thalamic nucleus | PV | 27–28 |
| paraventricular thalamic nucleus, anterior part | PVA | 25–26 |
| paraventricular thalamic nucleus, posterior part | PVP | 29–31 |
| paraventricular hypothalamic nucleus, anterior parvicular part | PaAP | 25–26 |
| posterior commissure | pc | 32–34 |
| posterior hypothalamic nucleus, dorsal part | PHD | 30–31 |
| posterior hypothalamic nucleus | PH | 31–32 |
| posterior intralaminar thalamic nucleus | PIL | 33–35 |
| posterior limitans thalamic nucleus | PLi | 33–35 |
| posterior pretectal nucleus | PPT | 33–35 |
| posterior superior fissure | psf | 43–54 |
| posterior thalamic nuclear group | Po | 28–33 |
| posterior thalamic nuclear group, triangular part | PoT | 33–35 |
| posterodorsal raphe nucleus | PDR | 39–42 |
| posterodorsal tegmental nucleus | PDTg | 45 |
| posterolateral cortical amygdaloid nuclei | PLCo | 27–29 |
| posterolateral fissure | plf | 43–55 |
| precommissural nucleus | PrC | 31–33 |
| preculminate fissure | pcf | 43–47 |
| precuneiform area | PrCnF | 38–41 |
| prefrontal cortex | PrL | 9–18 |
| premammillary nucleus, dorsal part | PMD | 33 |
| premammillary nucleus, ventral part | PMV | 32–33 |
| prepositus nucleus | Pr | 47–53 |
| prepyramidal fissure | ppf | 51–56 |
| prerubral field | PR | 31–34 |
| presubiculum | PrS | 35–38 |
| primary auditory cortex | Au1 | 28–33 |
| primary auditory field | A1 | 29–33 |
| primary fissure | pfr | 43–50 |
| primary motor cortex | MI | 11–28 |
| primary somatosensory cortex | S1 | 24–30 |
| primary somatosensory cortex, barrel field | S1BF | 20–28 |
| primary somatosensory cortex, dysgranular zone | S1DZ | 16–28 |
| primary somatosensory cortex, forelimb region | S1FL | 15–24 |
| primary somatosensory cortex, hindlimb region | S1HL | 20–26 |
| primary somatosensory cortex, jaw region | S1J | 13–20 |
| primary somatosensory cortex, oral dysgranular zone | S1DZO | 18–19 |
| primary somatosensory cortex, shoulder region | S1Sh | 25–26 |
| primary somatosensory cortex, trunk region | S1Tr | 27–28 |
| primary somatosensory cortex, upper lip region | S1ULp | 18–28 |
| primary visual cortex | V1 | 31–42 |
| primary visual cortex, binocular area | V1B | 32–39 |
| primary visual cortex, monocular area | V1M | 32–39 |
| principal mammillary tract | pm | 33–34 |
| Term | Abbreviation |
|------|--------------|
| Principal sensory trigeminal nucleus, dorsomedial part | Pr5DM |
| Principal sensory trigeminal nucleus, ventrolateral part | Pr5VL |
| Pyramidal cell layer of the hippocampus | Py |
| Pyramidal decussion | pyx |
| Pyramidal tract | py |
| Radiatum layer of the hippocampus | Rad |
| Raphe interpositus nucleus | RIP |
| Raphe magnus nucleus | RMa |
| Raphe obscurus nucleus | ROb |
| Raphe pallidus nucleus | RPa |
| Red nucleus, magnocellular part | RMC |
| Red nucleus, parvicellular part | RPC |
| Reticulostriate nucleus | RtSt |
| Reticular thalamic nucleus | Rt |
| Reticulotegmental nucleus of the pons | RtTg |
| Reticulotegmental nucleus of the pons, pericentral part | RtTgP |
| Retroambigous nucleus | RAmb |
| Retrochiasmatic area | RCh |
| Retrochiasmatic area, lateral part | RChL |
| Retrotrusiform nucleus | REth |
| Retrorubral field | RRF |
| Retrorubral nucleus | RR |
| Retrosplenial dysgranular cortex | RSD |
| Retrosplenial granular cortex | RSG |
| Retrosplenial granular cortex, a region | RSGa |
| Retrosplenial granular cortex, b region | RSGb |
| Retrosplenial granular cortex, c region | RSGc |
| Retrouniens area | Re |
| Rhabdoid nucleus | Rbd |
| Rhinal fissure | rf |
| Rhinal incisure | ri |
| Rhomboid thalamic nucleus | Rh |
| Rostral amygdalopiriform area | RAPr |
| Rostral interstitial nucleus of medial longitudinal fasciculus | RI |
| Rostral linear nucleus of the raphe | RLi |
| Rostral periventricular nucleus | RPO |
| Rostral ventral respiratory group | RVRG |
| Rubrospinal tract | rs |
| Sagulum nucleus | Sag |
| Scaphoid thalamic nucleus | Sc |
| Secondary auditory cortex, dorsal area | AuD |
| Secondary auditory cortex, ventral area | AuV |
| Secondary fissure | sf |
| Secondary motor cortex | M2 |
| Secondary somatosensory cortex | S2 |
| Secondary visual cortex, lateral area | V2L |
| Secondary visual cortex, medial area | V2M |
| Sensory root of the trigeminal nerve | s5 |
| Septofimbrial nucleus | SFi |
| Septohippocampal nucleus | SHi |
| Simple lobule | Sim |
| Simplex fissure | simf |
| Solitary nucleus, dorsolateral part | SolDL |
| Solitary nucleus, ventral part | SolV |
| Solitary tract | sol |
| Spherical cell area, ventral cochlear nucleus | Sca |
| Spinal trigeminal nucleus, caudal part | Sp5C |
| Spinal trigeminal nucleus, interpolar part | Sp5I |
| Spinal trigeminal nucleus, oral part | Sp5O |
| Spinal trigeminal tract | sp5 |
| Spinohypoglossal nucleus | SpVe |
| Splenium of the corpus callosum | scc |
| Stratum lucidum of the hippocampus | SLu |
| Stria medullaris of the thalamus | sm |
| Stria terminalis | st |
| Strial part of the preoptic area | StA |
| Subbregmal nucleus | SubB |
| Subcoeruleus nucleus, alpha part | SubCA |
| Subcoeruleus nucleus, dorsal part | SubCD |
| Subcoeruleus nucleus, ventral part | SubCV |
| Subcommissural organ | SCO |
| Subformical organ | SFO |
| Subgeniculate nucleus | SubG |
| Subiculum, transition area | StR |
| Subincertal nucleus | Subi |
| Sublenticular extended amygdala | EA |
| Sublenticular extended amygdala, central part | EAC |
| Submedial thalamic nucleus | Sub |
| Submedial thalamic nucleus, dorsal part | SubD |
| Submedial thalamic nucleus, ventral part | SubV |
| Subparafascicular thalamic nucleus | SPF |
| Subparafascicular thalamic nucleus, parvicellular part | SPFPC |
| Subparaventricular zone of the hypothalamus | SPA |
| Subpeduncular tegmental nucleus | SPFg |
| Substantia innominata, basal part | SIB |
| Substantia nigra, compact part | SNC |
| Substantia nigra, reticular part | SNR |
| Subthalamic nucleus | STh |
| Superficial gray layer of the superior colliculus | SuG |
| Superior cerebellar peduncle | scp |
| Superior medullary velum | SMV |
| Continued | | Continued |
|---|---|---|
| superior periolivary nucleus | SPN | 44–47 |
| superior thalamic radiation | str | 31–32 |
| superior vestibular nucleus | SuVe | 46–47 |
| suprachiasmatic nucleus | SCH | 25 |
| suprachiasmatic nucleus, dorsolateral part | SCHDL | 26 |
| suprachiasmatic nucleus, ventromedial part | SCHVM | 26 |
| suprageniculatethalamic nucleus | SG | 33–36 |
| suprageniculate nucleus | SGe | 46 |
| supramammillary decussation | sumx | 34 |
| supramammillary nucleus, lateral part | Suese | 33–34 |
| supramammillary nucleus, medial part | Suse3C | 36–36 |
| suprarectal motor cap | Suse3 | 36–39 |
| suprarectal motor periaqueductal gray | sox | 26–32 |
| suprarectal nucleus | SO | 23–27 |
| suprarectal nuclear | Suse5 | 43–45 |
| tectal gray | TG | 33–35 |
| tectospinal tract | ts | 39–62 |
| temporal association cortex | TeA | 37–39 |
| terete hypothalamic nucleus | Te | 31 |
| transverse fibers of the pons | tft | 39 |
| trapezoid body | tzt | 43–49 |
| triangular septal nucleus | TS | 24–25 |
| trigeminal transition zone | TS Tr | 44–46 |
| trigeminal-solitary transition zone | 5SSol | 48–55 |
| trigeminal-thalamic tract | th | 43–45 |
| trochlear nerve | 4n | 41–44 |
| trochlear nucleus | 4N | 39–40 |
| trochlear nuclei shell region | 4Sh | 39–40 |
| tuberal region of lateral hypothalamus | TuLH | 27–31 |
| uveal fissure | uf | 56–59 |
| vagus nerve | 10n | 52 |
| ventral anterior thalamic nucleus | VA | 27 |
| ventral cochlear nucleus, anterior part | VCA | 43–47 |
| ventral cochlear nucleus, posterior part | VCP | 47–49 |
| ventral endopiriform nucleus | VEn | 24–29 |
| ventral geniculate nucleus | VG | 29–34 |
| ventral geniculate nucleus, magnocellular part | VGMC | 31–32 |
| ventral geniculate nucleus, parvocellular part | VGPC | 31–32 |
| ventral hippocampal commissure | vhc | 25–27 |
| ventral linear nucleus of the thalamus | VLI | 33 |
| ventral nucleus of the lateral lemniscus, ventral part | VNLL | 40 |
| ventral nucleus of the lateral lemniscus, dorsal part | dVNLL | 41–42 |
| ventral nucleus of the lateral lemniscus, ventral part | vVNLL | 41–43 |
| ventral nucleus of the trapezoid body | VNTB | 43–47 |
| ventral orbital cortex | VO | 9–16 |
| ventral pallidum | VP | 16–25 |
| ventral part of claustrum | VCI | 16–26 |
| ventral posterior nucleus of the thalamus, parvicellular part | VPPC | 31 |
| ventral posterothalamic nucleus | VPL | 28–31 |
| ventral posterothalamic nucleus | VPM | 28–32 |
| ventral reuniens thalamic nucleus | VRM | 27–30 |
| ventral spinocerebellar tract | Vsc | 43–62 |
| ventral subiculum | VS | 31–36 |
| ventral tegmental area | VTA | 37–38 |
| ventral tegmental area, rostral part | VTAR | 34–35 |
| ventral tegmental decussation | Vgtx | 35–37 |
| ventral tegmental nucleus | VTg | 42 |
| ventral tenia tecta | VTT | 11–16 |
| ventral tuberomammillary nucleus | VTM | 33–34 |
| ventrolateral hypothalamic nucleus | VLH | 27 |
| ventrolateral hypothalamic tract | vdh | 27 |
| ventrolateral hypothalamic nucleus | VLPAG | 37–42 |
| ventrolateral periaqueductal gray | VLPO | 23–24 |
| ventrolateral thalamic nucleus | VL | 27–30 |
| ventromedial hypothalamic nucleus | VMH | 28–31 |
| ventromedial hypothalamic nucleus, central part | VMHC | 29–30 |
| ventromedial hypothalamic nucleus, dorosmedial part | VMHDM | 29–30 |
| venlamic nucleus, ventrolateral part | VMHVL | 29–30 |
| ventromedial nucleus of the hypothalamus shell | VMHSH | 28–31 |
| ventromedial preoptic nucleus | VMPO | 23–24 |
| ventromedial thalamic nucleus | VM | 27–30 |
| vestibulocerebellar nucleus | VeCt | 46–49 |
| vestibulocochlear nerve | 8n | 46–48 |
| vestibulomesencephalic tract | veme | 46–48 |
| vestibulospinal tract | vesp | 49 |
| xiphoid thalamic nucleus | Xi | 27–28 |
| zona incerta | ZI | 28–29 |
| zona incerta, caudal part | ZIC | 34–34 |
| zona incerta, dorsal part | ZID | 30–33 |
| zona incerta, rostral part | ZIR | 26–27 |
| zona incerta, ventral part | ZIV | 30–33 |
| zonal layer of the superior colliculus | Zo | 33–41 |
Index of Abbreviations

The abbreviations are listed in alphabetical order followed by the name of the structure and the plate number(s) of occurrence.

| Abbreviation | Description                                      | Plate Number(s) |
|---------------|--------------------------------------------------|-----------------|
| 1 layer 1 of cortex | 11–33                                             |                 |
| 2 layer 2 of cortex | 11–33                                             |                 |
| 3 layer 3 of cortex | 11–33                                             |                 |
| 4 layer 4 of cortex | 14–16                                             |                 |
| 1Cb 1st cerebellar lobule (lingula) | 46–48                                           |                 |
| 2Cb 2nd cerebellar lobule | 43–46                                           |                 |
| 3Cb 3rd cerebellar lobule | 43–49                                           |                 |
| 3n oculomotor nerve | 36–37                                             |                 |
| 3N oculomotor nucleus | 37–38                                             |                 |
| 3PC oculomotor nucleus, parvicellular part | 36                                               |                 |
| 3V 3rd ventricle | 23–34                                             |                 |
| 4Cb 4th cerebellar lobule | 41–49                                           |                 |
| 4n trochlear nerve | 41–44                                             |                 |
| 4N trochlear nucleus | 39–40                                             |                 |
| 4Sh trochlear nucleus shell region | 39–40                                           |                 |
| 4V 4th ventricle | 43–54                                             |                 |
| 5ADi motor trigeminal nucleus, anterior digastric part | 45–46                                           |                 |
| 5Cb 5th cerebellar lobule | 42–50                                           |                 |
| 5N motor trigeminal nucleus | 44–45                                         |                 |
| 5Sol trigeminal-solitary transition zone | 48–55                                           |                 |
| 5Tr trigeminal transition zone | 44–46                                         |                 |
| 5TT motor trigeminal nucleus, tensor tympani part | 43–44                                           |                 |
| 6Cb 6th cerebellar lobule | 46–54                                           |                 |
| 6n abducens nerve | 46–47                                             |                 |
| 6N abducens nucleus | 47                                               |                 |
| 7Cb 7th cerebellar lobule | 51–56                                           |                 |
| 7DI facial nucleus, dorsal intermediate subnucleus | 48–50                                           |                 |
| 7DL facial nucleus, dorsolateral subnucleus | 48–50                                           |                 |
| 7DM facial nucleus, dorsomedial subnucleus | 48–50                                           |                 |
| 7L facial nucleus, lateral subnucleus | 49–51                                           |                 |
| 7n facial nerve | 45–47                                             |                 |
| 7VI facial nucleus, ventral intermediate subnucleus | 48–50                                           |                 |
| 7VM facial nucleus, ventromedial subnucleus | 48–50                                           |                 |
| 8Cb 8th cerebellar lobule | 51–58                                           |                 |
| 8n vestibulocochlear nerve | 46–48                                         |                 |
| 9aCb 9th cerebellar lobule, a | 52–59                                           |                 |
| 9bCb 9th cerebellar lobule, b | 52–59                                           |                 |
| 9Cb 9th cerebellar lobule | 50–51                                           |                 |
| 9Cb 9th cerebellar lobule, c | 52–59                                           |                 |
| 9N glossopharyngeal nerve nucleus | 62                                               |                 |
| 10Cb 10th cerebellar lobule (nodule) | 50–55                                           |                 |
| 10N dorsal motor nucleus of vagus | 53–58                                         |                 |
| 10n vagus nerve | 52                                               |                 |
| 11N accessory nerve nucleus | 60–62                                         |                 |
| 12GH hypoglossal nucleus, geniohyoid part | 57–58                                         |                 |
| 12n hypoglossal nerve | 53–58                                             |                 |
| 12N hypoglossal nucleus | 51–58                                            |                 |
| A primary auditory field | 29–33                                           |                 |
| A11 A11 dopamine cells | 30–31                                           |                 |
| A13 A13 dopamine cells | 28–29                                           |                 |
| A5 A5 noradrenaline cells | 44–47                                          |                 |
| AA anterior amygdaloid area | 24–26                                           |                 |
| AAF anterior auditory field | 28–29                                        |                 |
| aca anterior commissure, anterior part | 11–24                                           |                 |
| AcbC accumbens nucleus, core | 16–21                                           |                 |
| AcbSh accumbens nucleus, shell | 16–21                                           |                 |
| acer anterior cerebral artery | 23                                             |                 |
| aci anterior commissure, intrabulbar part | 1–10                                            |                 |
| ACo anterior cortical amygdaloid nucleus | 24–28                                           |                 |
| acp anterior commissure, posterior part | 23–25                                          |                 |
| AD anterodorsal thalamic nucleus | 26–27                                          |                 |
| af amygdaloid fissure | 31–32                                             |                 |
| AHA anterior hypothalamic area, anterior part | 25–26                                           |                 |
| AHC anterior hypothalamic area, central part | 27–28                                          |                 |
| AHi amygdalohippocampal area | 29–33                                          |                 |
| AHP anterior hypothalamic area, posterior part | 28                                             |                 |
| AI agranular insular cortex | 11–27                                           |                 |
| ALPO anterolateral periolivary nucleus | 44                                             |                 |
| alv alveus of the hippocampus | 27–38                                         |                 |
| AM anteromedial thalamic nucleus | 25–28                                          |                 |
| AmbC ambiguous nucleus, compact part | 52                                             |                 |
| AmbL ambiguous nucleus, loose part | 55                                             |                 |
| AmbSC ambiguous nucleus, subcompact part | 53–54                                         |                 |
| AMV anteromedial thalamic nucleus, ventral part | 27                                           |                 |
| AngT angular thalamic nucleus | 28–28                                          |                 |
| ANS accessory neurosecretory nuclei | 27–28                                         |                 |
| AOD anterior olfactory nucleus, dorsal part | 8–12                                          |                 |
| AOE anterior olfactory nucleus, external part | 6–10                                          |                 |
| AOL anterior olfactory nucleus, lateral part | 6–12                                          |                 |
| AOM anterior olfactory nucleus, medial part | 9–13                                          |                 |
| AOP anterior olfactory nucleus, posterior part | 14–16                                         |                 |
| AOV anterior olfactory nucleus, ventral part | 8–11                                          |                 |
| AOVP anterior olfactory nucleus, ventroposterior part | 11–15                                           |                 |
| AP area postrema | 55–56                                             |                 |
| Apri amygdalopiriform transition area | 30–35                                    |                 |
| apmfn ansoparamedian fissure | 52–55                                      |                 |
| APT anterior pretectal nucleus | 35                                            |                 |
| APTD anterior pretectal nucleus, dorsal part | 31–34                                         |                 |
| APTV anterior pretectal nucleus, ventral part | 32–34                                         |                 |
| Aq aqueduct | 35–42                                             |                 |
| Arc arcuate hypothalamic nucleus | 27–33                                       |                 |
| asc7 ascending fibers of the facial nerve | 48                                            |                 |
| ASi amygdaloatrial transition area | 26–30                                      |                 |
continued

ATg anterior tegmental nucleus 40–41
Au1 primary auditory cortex 28–33
AuD secondary auditory cortex, dorsal area 28–36
AuV secondary auditory cortex, ventral area 28–36
AV anteroventral thalamic nucleus 25
AVDM anteroventral thalamic nucleus, dorsomedial part 26–28
AVPe anteroventral periventricular nucleus 23
AVVL anteroventral thalamic nucleus, ventrolateral part 26–27
B
B basal nucleus (Meynert) 24–29
BAC bed nucleus of the anterior commissure 24
BAOT bed nucleus of the accessory olfactory tract 27
Bar Barrington’s nucleus 43–44
bic brachium of the inferior colliculus 36–40
BIC nucleus of the brachium of the inferior colliculus 36–37
BLA basolateral amygdaloid nucleus, anterior part 25–29
BLP basolateral amygdaloid nucleus, posterior part 27–32
BLV basolateral amygdaloid nucleus, ventral part 25–27
BMA basomedial amygdaloid nucleus, anterior part 25–27
BMP basomedial amygdaloid nucleus, posterior part 28–31
Bo Bötzinger complex 52
bsc brachium of the superior colliculus 33–35
BV blood vessel 21
C
CA1 field CA1 of the hippocampus 28–36
CA2 field CA2 of the hippocampus 28–32
CA3 field CA3 of the hippocampus 27–34
CAT nucleus of the central acoustic tract 43
CB cell bridges of the ventral striatum 20–22
cbw cerebellar white matter 43–57
cc corpus callosum 20–30
CeC central amygdaloid nucleus, capsular part 26–29
CeCc central amygdaloid nucleus, capsular part 26–29
CeCv central amygdaloid nucleus, capsular part 26–29
CeL central amygdaloid nucleus, lateral division 27–28
CeM central amygdaloid nucleus, medial division 25–29
CEnt caudomedial entothinal cortex 35–41
CG central gray 43
cg cingulum 17–34
Cg1 cingulate cortex, area 1 10–27
Cg2 cingulate cortex, area 2 19–27
CGA central gray, alpha part 44–46
CGB central gray, beta part 44–45
CGG central gray, gamma part 46
CGO central gray, nucleus O 44–45
CGPn central gray of the pons 45
chp choroid plexus 24–54
CIC central nucleus of the inferior colliculus 39–42
continued

cic commissure of the inferior colliculus 42–43
CL centrolateral thalamic nucleus 28–31
Cl claustrum 12–27
CLi caudal linear nucleus of the thalamus 37–39
cll commissure of the lateral lemniscus 41–42
CM central medial thalamic nucleus 26–31
CNF cuneiform nucleus 41–43
Cop copula of the pyramids 49–57
cp cerebral peduncle 28–39
CPO caudal periolivary nucleus 48
CPu caudate putamen (striatum) 17–30
Cru1 crus 1 of the ansiform lobule 43–54
Cru2 crus 2 of the ansiform lobule 49–55
csc commissure of the superior colliculus 34–36

cst commissural stria terminalis 26–27
cu cuneate fasciculus 53–62
Cu cuneate nucleus 52–62
CuR cuneate nucleus, rotundus part 55–56
CVL caudoventrolateral reticular nucleus 52–53
CxA cortex-amygdala transition zone 24–26
D
DA dorsal hypothalamic area 29–30
das dorsal acoustic stria 49–50
DCDp dorsal cochlear nucleus, deep core 49–50
DCFu dorsal cochlear nucleus, fusiform layer 48–50
DCIC dorsal cortex of the inferior colliculus 40–43
DCI dorsal part of claustrum 16–26
DCMo dorsal cochlear nucleus, molecular layer 48–50
dcs dorsal corticospinal tract 60–62
dcw deep cerebral white matter 29–39
DEn dorsal endopiriform nucleus 12–32
df dorsal fornix 26–27
DG dentate gyrus 30
dhc dorsal hippocampal commissure 28–38
DI dysgranular insular cortex 13–27
Dk nucleus of Darkschewitsch 33–35
DLG dorsal lateral geniculate nucleus 29–33
dlO dorsal lateral olfactory tract 5–12
DLO dorsolateral orbital cortex 9–12
DLPAG dorsolateral periaqueductal gray 36–42
DLPO dorsolateral periolivary nucleus 44–47
DM dorsomedial hypothalamic nucleus 29–32
DMC dorsomedial hypothalamic nucleus, compact part 31
DMD dorsomedial hypothalamic nucleus, dorsal part 31
DMIC dorsomedial nucleus of the inferior colliculus 41–43
DMPAG dorsomedial periaqueductal gray 35–42
DMSp5 dorsomedial spinal trigeminal nucleus 48–54
DMTg dorsomedial tegmental area 43–45
| Abbreviation | Description |
|--------------|-------------|
| DMV          | dorsomedial hypothalamic nucleus, ventral part |
| DNLL         | dorsal nucleus of the lateral lemniscus |
| DP           | dorsal peduncular cortex |
| DpG          | deep gray layer of the superior colliculus |
| DPGi         | dorsal paragigantocellular nucleus |
| DPO          | dorsal periolivary nucleus |
| DpWh         | deep white layer of the superior colliculus |
| DR           | dorsal raphe nucleus |
| DRC          | dorsal raphe nucleus, caudal part |
| DRD          | dorsal raphe nucleus, dorsal part |
| DRL          | dorsal raphe nucleus, lateral part |
| DRV          | dorsal raphe nucleus, ventral part |
| DS           | dorsal subiculum |
| dsc          | dorsal spinocerebellar tract |
| DTg          | dorsal tegmental nucleus |
| DTgC         | dorsal tegmental nucleus, central part |
| DTgP         | dorsal tegmental nucleus, pericentral part |
| dtgx         | dorsal tegmental decussation |
| Dtr          | dorsal transition zone |
| DTT          | dorsal tenia tecta |
| dVNLL        | ventral nucleus of the lateral lemniscus, dorsal part |
| E            | ependyma and subependymal layer |
| EA           | sublenticular extended amygdala |
| EAC          | sublenticular extended amygdala, central part |
| ec           | external capsule |
| ECIC         | external cortex of the inferior colliculus |
| Ect          | ectortorial cortex |
| ECu          | external cuneate nucleus |
| eml          | external medullary lamina |
| Ent          | entorhinal cortex |
| EP           | entopeduncular nucleus |
| EPI          | external plexiform layer of the olfactory bulb |
| EPA          | external plexiform layer of the accessory olfactory bulb |
| Eth          | ethmoid thalamic nucleus |
| EVe          | nucleus of origin of efferents of the vestibular nerve |
| EW           | Edinger–Westphal nucleus |
| F            | fornix |
| f            | nucleus of the fields of Forel |
| FC           | fasciola cinereum |
| fi           | fimbria of the hippocampus |
| Fl           | flocculus |
| fmi          | forceps minor of the corpus callosum |
| fmj          | forceps major of the corpus callosum |
| fr           | fasciculus retroflexus |
| Fr3          | frontal cortex, area 3 |
| FrA          | frontal association cortex |
| Fu           | bed nucleus of stria terminais, fusiform part |
| FVe          | F cell group of the vestibular complex |
| G            | genu of the facial nerve |
| Gca          | globular cell area, ventral cochlear nucleus |
| gcc          | genu of the corpus callosum |
| Ge5          | gelatinous layer of the caudal spinal trigeminal nucleus |
| Gi           | gigantocellular reticular nucleus |
| GI           | granular insular cortex |
| GiA          | gigantocellular reticular nucleus, alpha part |
| GiV          | gigantocellular reticular nucleus, ventral part |
| Gl           | glomerular layer of the olfactory bulb |
| GIa          | glomerular layer of the accessory olfactory bulb |
| GP           | globus pallidus |
| gr           | gracile fasciculus |
| Gr           | gracile nucleus |
| GrA          | granule cell layer of the accessory olfactory bulb |
| GrC          | granule cell layer of cochlear nuclei |
| GrDG         | granular layer of the dentate gyrus |
| GrO          | granular cell layer of the olfactory bulb |
| hbc          | habenular commissure |
| hif          | hippocampal fissure |
| I            | intercalated nuclei of the amygdala |
| IAD          | interanterodorsal thalamic nucleus |
| IAM          | interanteromedial thalamic nucleus |
| IB           | interstitial nucleus of the medulla |
| ic           | internal capsule |
| icf          | intercruical fissure |
| Icj          | islands of Calleja |
| ICJM         | islands of Calleja, major island |
| icp          | inferior cerebellar peduncle (restiform body) |
| IEn          | intermediate endopiriform nucleus |
| IF           | interfascicular nucleus |
| IG           | indusium griseum |
| IL           | infralimbic cortex |
| IM           | intercalated amygdaloid nucleus, main part |
| IMD          | intermediodorsal thalamic nucleus |
| IMG          | amygdaloid intramedullary gray |
| iml          | internal medullary lamina |
| imvc         | intermedioventral thalamic commissure |
| InC          | interstitial nucleus of Cajal |
| InG          | intermediate gray layer of the superior colliculus |
| INLL         | intermediate nucleus of the lateral lemniscus |
| IntA         | interposed cerebellar nucleus, anterior part |
| IntDL        | interposed cerebellar nucleus, dorsolateral hump |
| IntDM        | interposed cerebellar nucleus, dorsomedial crest |
| Abbreviation | Full Name | Page Numbers |
|--------------|-----------|--------------|
| IntP         | interposed cerebellar nucleus, posterior part | 49–50 |
| IntPPC       | interposed cerebellar nucleus, posterior parvicular part | 49–50 |
| InWh         | intermediate white layer of the superior colliculus | 33–41 |
| IOA          | inferior olive, subnucleus A of medial nucleus | 57–58 |
| IOB          | inferior olive, subnucleus B of medial nucleus | 56–58 |
| IOBe         | inferior olive, beta subnucleus | 56–58 |
| IOC          | inferior olive, subnucleus C of medial nucleus | 56–58 |
| IOD          | inferior olive, dorsal nucleus | 52–56 |
|IODM         | inferior olive, dorsomedial cell group | 52–55 |
| IOK          | inferior olive, cap of Kooy of the medial nucleus | 56–57 |
| IOM          | inferior olive, medial nucleus | 52–55 |
| IOPr         | inferior olive, principal nucleus | 52–56 |
| IPAC         | interstitial nucleus of the posterior limb of the anterior commissure | 22–25 |
| IPC          | interpeduncular nucleus, caudal subnucleus | 37–40 |
| IPD          | interpeduncular nucleus, dorsal subnucleus | 38 |
| IPI          | interpeduncular fossa | 36 |
| IPI          | interpeduncular nucleus, intermediate subnucleus | 38–39 |
| IPL          | internal plexiform layer of the olfactory bulb | 1–10 |
| IPR          | interpeduncular nucleus, lateral subnucleus | 37–39 |
| IRt          | intermediate reticular nucleus | 46–62 |
| isRt         | isthmic reticular formation | 39–42 |
| IVF          | interventricular foramen | 25 |
| K            | Kolliker–Fuse nucleus | 43–44 |
| L            | lateral amygdaloid nucleus | 26–31 |
| LA           | lateral anterior hypothalamic nucleus | 25–26 |
| LAcSh        | lateral accumbens shell | 19–21 |
| LaD          | lateral amygdaloid nucleus, dorsal part | 27–30 |
| Lat          | lateral (dentate) cerebellar nucleus | 46–49 |
| LatPC        | lateral cerebellar nucleus, parvicular part | 46–48 |
| LaV          | lateral amygdaloid nucleus, ventral part | 27–30 |
| LC           | locus coeruleus | 44–45 |
| Ld           | lambdoid septal zone | 19–21 |
| LDDM         | laterodorsal thalamic nucleus, dorsomedial part | 27–28 |
| LDfTg        | laterodorsal tegmental nucleus | 42–44 |
| LDfTV        | laterodorsal tegmental nucleus, ventral part | 43 |
| LDVL         | laterodorsal thalamic nucleus, ventrolateral part | 27–29 |
| LEnt         | lateral entorhinal cortex | 29–41 |
| lfp          | longitudinal fasciculus of the pons | 40–43 |
| LHb          | lateral habenular nucleus | 28–31 |
| LHbL         | lateral habenular nucleus, lateral part | 29–30 |
| LHBM         | lateral habenular nucleus, medial part | 29–30 |
| Li           | linear nucleus of the medulla | 51–53 |
| II           | lateral lemniscus | 39–43 |
| LM           | lateral mammillary nucleus | 33–35 |
| LMol         | lacunosum moleculare layer of the hippocampus | 29–36 |
| LNTB         | lateral nucleus of the trapezoid body | 44–47 |
| Io           | lateral olfactory tract | 5–25 |
| LO           | lateral orbital cortex | 8–16 |
| LOT          | nucleus of the lateral olfactory tract | 25–26 |
| LPAG         | lateral periaqueductal gray | 35–42 |
| LPB          | lateral parabrachial nucleus | 45 |
| LPBC         | lateral parabrachial nucleus, central part | 43–44 |
| LPBCr        | lateral parabrachial nucleus, crescent part | 44 |
| LPBI         | lateral parabrachial nucleus, internal part | 43–45 |
| LGi          | lateral paragigantocellular nucleus | 51–53 |
| LGiA         | lateral paragigantocellular nucleus, alpha part | 48–50 |
| LGiE         | lateral paragigantocellular nucleus, external part | 48–50 |
| LPLC         | lateral posterior thalamic nucleus, lateroaudal part | 32–33 |
| LPLR         | lateral posterior thalamic nucleus, laterooral part | 29–31 |
| LPMC         | lateral posterior thalamic nucleus, medioaudal part | 32–34 |
| LPMR         | lateral posterior thalamic nucleus, mediororal part | 29–32 |
| LPO          | lateral preoptic area | 22–25 |
| LPTA         | lateral parietal association cortex | 28–30 |
| LR4V         | lateral recess of the 4th ventricle | 45–51 |
| LrT          | lateral reticular nucleus | 54–59 |
| LrTPC        | lateral reticular nucleus, parvicular part | 56–58 |
| LrTS5        | lateral reticular nucleus, subtrigeminal part | 55–56 |
| LSD          | lateral septal nucleus, dorsal part | 19–25 |
| LSI          | lateral septal nucleus, intermediate part | 18–23 |
| LSO          | lateral superior olive | 45–47 |
| LSS          | lateral stripe of the striatum | 21–23 |
| LSV          | lateral septal nucleus, ventral part | 19–23 |
| LT           | lateral terminal nucleus of the accessory optic tract | 33 |
| LTer         | lemina terminalis | 24 |
| Lth          | liothid nucleus | 33 |
| LV           | lateral ventricle | 17–32 |
| LVe          | lateral vestibular nucleus | 47–49 |
| LVPO         | lateroventral periolivary nucleus | 44–47 |
| M            | magnocellular nucleus of the lateral hypothalamus | 29 |
| M1           | primary motor cortex | 11–28 |
| M2           | secondary motor cortex | 10–28 |
| m5           | motor root of the trigeminal nerve | 43–45 |
| MA3          | medial accessory oculomotor nucleus | 34–35 |
| mcer         | middle cerebral artery | 23 |
| mch          | medial corticohypothalamic tract | 25 |
| MCLH         | magnocellular nucleus of the lateral hypothalamus | 29 |
| mcp          | middle cerebellar peduncle | 40–46 |
| MCPC         | magnocellular nucleus of the posterior commissure | 33–34 |
| MCOPO        | magnocellular preoptic nucleus | 23–25 |
| MD           | mediodorsal thalamic nucleus | 27 |
| MDC          | mediodorsal thalamic nucleus, central part | 28–30 |
| MdD          | medullary reticular nucleus, dorsal part | 55–62 |
| MDL          | mediodorsal thalamic nucleus, lateral part | 28–30 |
| MDM          | mediodorsal thalamic nucleus, medial part | 28–30 |
| Acronym | Description | Section |
|---------|-------------|---------|
| MdV     | medullary reticular nucleus, ventral part | 55–62   |
| ME      | median eminence | 30–32   |
| Me5     | mesencephalic trigeminal nucleus | 38–45   |
| me5     | mesencephalic trigeminal tract | 43–45   |
| MeAD    | medial amygdaloid nucleus, anterodorsal part | 26–27   |
| MeAV    | medial amygdaloid nucleus, anteroventral part | 27 |
| Med     | medial (fastigial) cerebellar nucleus | 47–50   |
| MedDL   | medial cerebellar nucleus, dorsolateral protuberance | 49–50   |
| MedL    | medial cerebellar nucleus, lateral part | 49–50   |
| MeEnt   | medial entorhinal cortex | 34–41   |
| MePD    | medial amygdaloid nucleus, posterodorsal part | 27–29   |
| MePV    | medial amygdaloid nucleus, posteroventral part | 28–29   |
| mfb     | medial forebrain bundle | 19–32   |
| MGD     | medialgeniculate nucleus, dorsal part | 33–36   |
| MGM     | medial geniculate nucleus, medial part | 33–36   |
| MGV     | medial geniculate nucleus, ventral part | 33–36   |
| MHB     | medial habenular nucleus | 27–31   |
| Mi      | mitral cell layer of the olfactory bulb | 1–10    |
| MiA     | mitral cell layer of the accessory olfactory bulb | 5–9    |
| MiTg    | microcellular tegmental nucleus | 38–39   |
| ml      | medial lemniscus | 28–54   |
| ML      | medial mammillary nucleus, lateral part | 34–36   |
| mlf     | medial longitudinal fasciculus | 37–62   |
| mlx     | medial lemniscal decussation | 56     |
| MM      | medial mammillary nucleus, medial part | 34–35   |
| MnA     | median accessory nucleus of the medulla | 59–62   |
| MnM     | medial mammillary nucleus, median part | 34     |
| MnPO    | median preoptic nucleus | 22–24   |
| MnR     | median raphe nucleus | 39–43   |
| MNTB    | medial nucleus of the trapezoid body | 43–47   |
| MO      | medial orbital cortex | 8–14    |
| MoDG    | molecular layer of the dentate gyrus | 27–37   |
| MoS     | molecular layer of the subiculum | 37     |
| mp      | mammillary peduncle | 35–36   |
| MPA     | medial preoptic area | 22–25   |
| MPB     | medial parabrachial nucleus | 43–45   |
| MPBE    | medial parabrachial nucleus, external part | 44     |
| MPL     | paralemniscal nucleus, medial part | 41–42   |
| MPO     | medial preoptic nucleus | 24–25   |
| MPT     | medial pretectal nucleus | 32     |
| MPa     | medial parietal association cortex | 28–30   |
| MRe     | mammillary recess of the 3rd ventricle | 34     |
| mrt     | mesencephalic reticular formation | 36–38   |
| MS      | medial septal nucleus | 19–23   |
| MSO     | medial superior olive | 44–47   |
| mt      | mammillothalamic tract | 27–33   |
| MT      | medial terminal nucleus of the accessory optic tract | 35 |
| mtg     | mammillotemporal tract | 33     |
| MTu     | medial tuberal nucleus | 29–31   |
| MVe     | medial vestibular nucleus | 53     |
| MVeMC   | medial vestibular nucleus, magnocellular part | 46–52 |
| MVePC   | medial vestibular nucleus, parvicellular part | 46–52 |
| MVPO    | medioventral periolivary nucleus | 44–47   |
| Mx      | matrix region of the medulla | 50–59   |
| MZMG    | marginal zone of the medial geniculate | 33–35   |
| N       | nigror striatal bundle | 27–33   |
| Nv      | navicular nucleus of the basal forebrain | 17–18   |
| O       | olivocerebellar tract | 50–54   |
| Oca     | octopus cell area, ventral cochlear nucleus | 47–49   |
| ocb     | olivocochlear bundle | 46–47   |
| och     | optic chiasm | 21–25   |
| ON      | olfactory nerve layer | 1–8     |
| Op      | optic nerve layer of the superior colliculus | 33–40   |
| OPC     | oval paracentral thalamic nucleus | 29–31   |
| OPT     | olivary pretectal nucleus | 32–33   |
| opt     | optic tract | 26–33   |
| Or      | oriens layer of the hippocampus | 27–36   |
| OT      | nucleus of the optic tract | 32–35   |
| OV      | olfactory ventricle (olfactory part of lateral ventricle) | 1–16 |
| P       | p1PAG | p1 periaqueductal gray | 32–34 |
| P1Rt    | p1 reticular formation | 32–35 |
| P5      | peritrigeminal zone | 43–46   |
| P7      | perifacial zone | 48–51   |
| Pa4     | paratrochlear nucleus | 40–41   |
| PaS     | paragigantocellular nucleus | 54–57 |
| P6      | parabulucens nucleus | 46–47   |
| PaAP    | paraventricular hypothalamic nucleus, anterior parvicular part | 25–26 |
| PaMM    | paraventricular hypothalamic nucleus, medial magnocellular part | 27–28 |
| PaMP    | paraventricular hypothalamic nucleus, medial parvicular part | 27 |
| PaPo    | paraventricular hypothalamic nucleus, posterior part | 28 |
| PaR     | pararubral nucleus | 35–38   |
| PaS     | parasubiculum | 35–42   |
| PaV     | paraventricular hypothalamic nucleus, ventral part | 27 |
| PaXi    | paraxiphoid nucleus of thalamus | 27–29 |
| PBG     | parabigeminal nucleus | 38–40   |
| PBP     | parabrachial pigmented nucleus of the ventral tegmental area | 33–37 |
| PC      | paracentral thalamic nucleus | 27–30   |
| pc      | posterior commissure | 32–34   |

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| Term                  | Description                                                                 | Page |
|----------------------|-----------------------------------------------------------------------------|------|
| PCGS                 | paracochlear glial substance                                                | 46   |
| pcn                  | precentral fissure                                                         | 43–46|
| PCom                 | nucleus of the posterior commissure                                        | 33–34|
| PCRt                 | parvicellular reticular nucleus                                            | 46–54|
| pcf                  | prelunate fissure                                                          | 43–47|
| PDR                  | posteroventral raphe nucleus                                                | 39–42|
| PDTg                 | posteroventral tegmental nucleus                                           | 45   |
| Pe                   | periventricular hypothalamic nucleus                                        | 23–30|
| PeF                  | perifornical nucleus                                                       | 29–30|
| PeFLH                | periformal part of lateral hypothalamus                                    | 29–32|
| PF                   | parafascicular thalamic nucleus                                            | 31–32|
| PFI                  | paraflocculus                                                              | 43–50|
| pfS                  | parafloccular sulcus                                                       | 44–50|
| PH                   | posterior hypothalamic nucleus                                             | 31–32|
| PHA                  | posterior hypothalamic area                                                | 33   |
| PHD                  | posterior hypothalamic area, dorsal part                                   | 30–31|
| PIF                  | paraintersisfascicular nucleus of the ventral tegmental area               | 36–37|
| PIF                  | paraintersisfascicular nucleus of the ventral tegmental area               | 36–37|
| PIL                  | posterior intralaminar thalamic nucleus                                    | 33–35|
| Pir                  | piriform cortex                                                            | 11–33|
| PL                   | paralemniscal nucleus                                                       | 40–42|
| PLCo                 | posterolateral cortical amygdaloid nucleus                                 | 27–29|
| plf                  | posterolateral fissure                                                     | 43–55|
| PLH                  | peduncular part of lateral hypothalamus                                    | 26–33|
| PLi                  | posterior limitans thalamic nucleus                                        | 33–35|
| PLV                  | peri lateral thalamic nucleus                                              | 41–43|
| PM                   | paramedian lobule                                                          | 49–56|
| pm                   | principal mammillary tract                                                 | 33–34|
| PMCo                 | posterolateral cortical amygdaloid nucleus                                 | 29–33|
| PMD                  | premammillary nucleus, dorsal part                                         | 33   |
| PMnR                 | paramedian raphe nucleus                                                   | 39–42|
| pms                  | paramedian sulcus                                                          | 50–55|
| PMV                  | premammillary nucleus, ventral part                                        | 32–33|
| PN                   | paranigral nucleus of the ventral tegmental area                           | 36–37|
| Pn                   | pontine nuclei                                                             | 39–42|
| PnC                  | pontine reticular nucleus, caudal part                                     | 44–47|
| PnO                  | pontine reticular nucleus, oral part                                       | 39–43|
| PnR                  | pontine raphe nucleus                                                      | 43   |
| PnV                  | pontine reticular nucleus, ventral part                                    | 45–47|
| Po                   | posterior thalamic nuclear group                                           | 28–33|
| PoDG                 | polymorph layer of the dentate gyrus                                       | 28–35|
| PoMn                 | posteromedial thalamic nucleus                                             | 31   |
| Post                 | postsubiculum                                                              | 35–40|
| PoT                  | posterior thalamic nuclear group, triangular part                           | 33–35|
| PP                   | peripeduncular nucleus                                                     | 33–35|
| pPF                  | prepyramidal fissure                                                       | 51–56|
| PPT                  | posterior pretectal nucleus                                                | 33–35|
| PPy                  | parapyramidal nucleus                                                      | 49–50|
| Pr                   | prepositus nucleus                                                         | 47–53|
| PR                   | prenubral field                                                            | 31–34|
| Pr5DM                | principal sensory trigeminal nucleus, dorsomedial part                     | 44–47|
| Pr5VL                | principal sensory trigeminal nucleus, ventrolateral part                   | 43–47|
| PrC                  | precommissural nucleus                                                     | 31–33|
| PrCnF                | precuneiform area                                                          | 38–41|
| PrEW                 | pre-Edinger-Westphal nucleus                                               | 34–35|
| prf                  | primary fissure                                                            | 43–50|
| PRh                  | perirhinal cortex                                                          | 28–42|
| PrL                  | prelimbic cortex                                                           | 9–18 |
| PrS                  | presubiculum                                                               | 35–38|
| PS                   | parastrial nucleus                                                         | 23–24|
| psf                  | posterior superior fissure                                                 | 43–54|
| PSS                  | parasolitary nucleus                                                       | 54–55|
| PSTh                 | parasubthalamic nucleus                                                    | 32   |
| PT                   | paratenial thalamic nucleus                                                | 25–27|
| Pta                  | pericollateral tegmental area                                               | 39–43|
| PTe                  | paraterete nucleus                                                         | 29–30|
| PTg                  | pedunculopontine tegmental nucleus                                         | 38–42|
| PvP                  | paraventricual thalamic nucleus                                            | 27–28|
| PVA                  | paraventricual thalamic nucleus, anterior part                             | 25–26|
| PVP                  | paraventricual thalamic nucleus, posterior part                            | 29–31|
| Py                   | pyramidal cell layer of the hippocampus                                    | 27–36|
| py                  | pyramidal tract                                                            | 43–58|
| pyx                 | pyramidal decusssion                                                       | 57–62|
| R                    | Radial layer of the hippocampus                                            | 28–36|
| RAmb                 | retroambigous nucleus                                                      | 56–58|
| RAPir                | rostral amygdalopiriform area                                              | 28–30|
| Rbd                  | rhaboid nucleus                                                            | 39   |
| RCh                  | retrochiasmatic area                                                       | 27–28|
| RCHL                 | retrochiasmatic area, lateral part                                         | 27   |
| Re                   | reuniens thalamic nucleus                                                  | 26–30|
| REn                  | retroethmoid nucleus                                                      | 33   |
| rf                  | rhinal fissure                                                              | 7–41 |
| Rh                  | rhomboid thalamic nucleus                                                  | 27–30|
| ri                  | rhinal incisure                                                             | 7–12 |
| RI                  | rostral interstitiaal nucleus of medial longitudinal fascicul            | 32–33|
| RIP                  | raphe interpositus nucleus                                                 | 46–48|
| RLI                  | rostral linear nucleus of the raphe                                        | 35–35|
| RMC                  | red nucleus, magnocellular part                                            | 35–38|
| RMg                  | raphe magnus nucleus                                                       | 44–51|
| Ro                  | nucleus of Roller                                                         | 52–56|
| ROb                  | raphe obscurus nucleus                                                     | 50–58|
| RPa                  | raphe pallidus nucleus                                                     | 43–58|
| RPC                  | red nucleus, parvicellular part                                            | 35–36|
| RPO                  | rostral periolivary nucleus                                                | 44   |
| RR                  | retrorubral nucleus                                                        | 39–40|
| Term             | Abbreviation | Synonym                           | Page(s) |
|------------------|--------------|-----------------------------------|---------|
| Retroins area    | RRe          | Rr                              | 31      |
| Retrorubral field| RRF          | Rr                              | 37–39   |
| Rubrospinal tract| rs           | Rb                              | 41–62   |
| Retrosplenial dysgranular cortex | RSD | Rsp                            | 27–42   |
| Retrosplenial granular cortex | RSG | Rsp                            | 40      |
| Retrosplenial granular cortex, a region | RSGa | Rsp                            | 35–39   |
| Retrosplenial granular cortex, b region | RSGb | Rsp                            | 32–39   |
| Retrosplenial granular cortex, c region | RSGc | Rsp                            | 27–36   |
| Reticular thalamic nucleus | Rt | Rt                              | 26–30   |
| Reticulostrial nucleus | RtSt | Rt                              | 26      |
| Reticulotegmental nucleus of the pons | RtTg | Rtg                            | 41–45   |
| Reticulotegmental nucleus of the pons, pericentral part | RtTgP | Rtg                            | 41–42   |
| Rostral ventral respiratory group | RVRG | Rvr                            | 53      |
| Primary somatosensory cortex | S1 | S1                              | 24–30   |
| Primary somatosensory cortex, barrel field | S1BF | S1                              | 20–28   |
| Primary somatosensory cortex, dysgranular zone | S1DZ | S1                              | 16–28   |
| Primary somatosensory cortex, oral dysgranular zone | S1DZO | S1                              | 18–19   |
| Primary somatosensory cortex, forelimb region | S1FL | S1                              | 15–24   |
| Primary somatosensory cortex, hindlimb region | S1HL | S1                              | 20–26   |
| Primary somatosensory cortex, jaw region | S1J | S1                              | 13–20   |
| Primary somatosensory cortex, shoulder region | S1Sh | S1                            | 25–26   |
| Primary somatosensory cortex, trunk region | S1Tr | S1                            | 27–28   |
| Primary somatosensory cortex, upper lip region | S1ULp | S1                              | 18–28   |
| Secondary somatosensory cortex | S2 | S2                              | 18–28   |
| Sensory root of the trigeminal nerve | s5 | S5                              | 42–47   |
| Sagulum nucleus | Sag | Sag                            | 41–43   |
| Scaphoid thalamic nucleus | Sc | Sc                              | 32      |
| Spherical cell area, ventral cochlear nucleus | Sca | Sca                           | 43–46   |
| Splenium of the corpus callosum | Scc | Scc                            | 31–33   |
| Supraopasamic nucleus | SCh | SCh                             | 25      |
| Supraopasamic nucleus, dorsolateral part | SchDL | SCh                           | 26      |
| Supraopasamic nucleus, ventromedial part | SchVM | SCh                           | 26      |
| Subcommissural organ | SCO | SCO                            | 32–34   |
| Superior cerebellar peduncle | scp | Scp                            | 41–49   |
| Secondary fissure | sf | Sf                              | 53–58   |
| Septofimbrial nucleus | SFi | SFi                            | 22–25   |
| Subfornical organ | SFO | SFO                            | 25      |
| Suprageniculate thalamic nucleus | SG | SG                              | 33–36   |
| Supragenual nucleus | SGc | SGc                            | 46      |
| Septohippocampal nucleus | SH | SH                              | 18–25   |
| Substantia innominata, basal part | SIB | Sib                            | 21–24   |
| Simple lobule | Sim | Sim                            | 43–49   |
| Simplex fissure | Simf | Simf                           | 47–49   |
| Stratum lucidum of the hippocampus | SLu | Slu                            | 28–33   |
| Stria medularis of the thalamus | sm | Sm                             | 25–30   |
| Superior medullary velum | SMV | SMV                            | 45–47   |
| Substantia nigra, compact part | SNC | SNC                            | 33–38   |
| Substantia nigra, reticular part | SNR | SNR                            | 33–38   |
| Supraopinic nucleus | SO | SO                              | 23–27   |
| Nucleus of the solitary tract | Sol | Sol                            | 49–50   |
| Solitary tract | sol | Sol                            | 50–57   |
| Nucleus of the solitary tract, commissural part | SolC | SolC                          | 55–62   |
| Solitary nucleus, dorsolateral part | SolDL | Sol                            | 55–57   |
| Nucleus of the solitary tract, medial part | SolM | SolM                          | 55–59   |
| Solitary nucleus, ventral part | SolV | SolV                           | 55–57   |
| Nucleus of the solitary tract, ventrolateral part | SolVL | SolV                          | 55–57   |
| Supraopetic decussation | Sox | Sox                            | 26–32   |
| Spinal trigeminal tract | sp5 | Sp5                            | 48–62   |
| Spinal trigeminal nucleus, caudal part | Sp5C | Sp5C                          | 55–62   |
| Spinal trigeminal nucleus, interpolar part | Sp5I | Sp5I                          | 49–56   |
| Spinal trigeminal nucleus, oral part | Sp5O | Sp5O                          | 48–51   |
| Subparaventricular zone of the hypothalamus | SPA | SPA                           | 27–28   |
| Subparafascicular thalamic nucleus | SPF | SPF                            | 31      |
| Subparafascicular thalamic nucleus, parvicellular part | SPFPC | SPFPC                      | 31–32   |
| Superior periolivary nucleus | SPN | SPN                           | 44–47   |
| Subpeduncular segmental nucleus | SPTg | SPTg                         | 40–42   |
| Spinal vestibular nucleus | SpVe | SpVe                         | 48–53   |
| Bed nucleus of the stria terminalis | ST | ST                             | 22      |
| Stria terminalis | st | st                             | 23–31   |
| Strial part of the preoptic area | Sta | Sta                            | 23      |
| Subthalamic nucleus | Sth | Sth                           | 30–32   |
| Bed nucleus of the stria terminalis, intraamygdaloid division | STIA | STIA                        | 28–29   |
| Bed nucleus of the stria terminalis, lateral division, intermediate part | STL | STL                           | 24      |
| Bed nucleus of the stria terminalis, lateral division, posterior part | STLP | STLP                         | 23–24   |
| Bed nucleus of the stria terminalis, lateral division, ventral part | STLV | STLV                         | 23–24   |
| Bed nucleus of the stria terminalis, medial division, anterior part | STMA | STMA                        | 23–24   |
| Bed nucleus of the stria terminalis, medial division, posterior part | STMP | STMP                        | 25–26   |
| Bed nucleus of the stria terminalis, medial division, ventral part | STMV | STMV                        | 23–24   |
| Subiculum, transition area | Str | Str                           | 37–38   |
| Superior thalamic radiation | str | Str                           | 31–32   |
| Supracoeculomotor periaqueductual gray | Su3 | Su3                           | 36–39   |
| Supraoculomotor cap | Su3C | Su3C                         | 36–36   |
| Supratrigeminal nucleus | Su5 | Su5                           | 43–45   |
| Submedius thalamic nucleus | Sub | Sub                           | 30      |
| Subbrachial nucleus | SubB | SubB                          | 36–38   |
| Subcoeruleus nucleus, alpha part | SubCA | SubCA                      | 44      |
| Subcoeruleus nucleus, dorsal part | SubCD | SubCD                      | 43–45   |
| Subcoeruleus nucleus, ventral part | SubCV | SubCV                      | 43–45   |
| Submedius thalamic nucleus, dorsal part | SubD | SubD                         | 28–29   |
| Submedius thalamic nucleus | SubG | SubG                          | 31–32   |
continued

| Acronym | Description                                      | Page |
|---------|---------------------------------------------------|------|
| SubI    | Subincertal nucleus                               | 29–30|
| SubV    | Submedius thalamic nucleus, ventral part          | 28–29|
| SuG     | Superficial gray layer of the superior colliculus | 33–41|
| SuML    | Supramammillary nucleus, lateral part             | 33–34|
| SuMM    | Supramammillary nucleus, medial part              | 33–34|
| sumx    | Supramammillary decussation                       | 34   |
| SuVe    | Superior vestibular nucleus                       | 46–47|
| Te      | Terete hypothalamic nucleus                       | 31   |
| TeA     | Temporal association cortex                       | 37–39|
| tfp     | Transverse fibers of the pons                     | 39   |
| TG      | Tectal gray                                       | 33–35|
| ts      | Tectospinal tract                                 | 39–62|
| TS      | Triangular septal nucleus                         | 24–25|
| tth     | Trigeminothalamic tract                           | 43–45|
| Tu      | Olfactory tubercle                                | 16–23|
| TuLH    | Tuberal region of lateral hypothalamus            | 27–31|
| tz      | Trapezoid body                                    | 43–49|
| tzx     | Decussation of the trapezoid body                 | 44–47|
| uf      | Uvular fissure                                    | 56–59|
| Vvp     | Ventral paracentral nucleus                       | 43–47|
| VA      | Ventral anterior thalamic nucleus                 | 27   |
| VCA     | Ventral cochlear nucleus, anterior part           | 43–47|
| VCI     | Ventral part of claustrum                         | 16–26|
| VCP     | Ventral cochlear nucleus, posterior part          | 47–49|
| VDB     | Nucleus of the vertical limb of the diagonal band | 19–21|
| VeCb    | Vestibulocerebellar nucleus                       | 46–49|
| veme    | Vestibulomesencephalic tract                      | 46–48|
| VEn     | Ventral endopiriform nucleus                      | 24–29|
| vesp    | Vestibulospinal tract                             | 49   |
| VG      | Ventral geniculate nucleus                        | 29–34|
| VGMC    | Ventral geniculate nucleus, magnocellular part    | 31–32|
| VGPC    | Ventral geniculate nucleus, parvicellular part    | 31–32|
| vhc     | Ventral hippocampal commissure                    | 25–27|
| VL      | Ventrolateral thalamic nucleus                    | 27–30|
| VLH     | Ventrolateral hypothalamic nucleus                | 27   |
| vlh     | Ventrolateral hypothalamic tract                  | 27   |
| VLH     | Ventrolateral hypothalamic nucleus                | 27   |
| VMH     | Ventromedial hypothalamic nucleus                 | 29–30|
| VMHDM   | Ventromedial hypothalamic nucleus, dorsomedial    | 29–30|
| VMHSH   | Ventromedial nucleus of the hypothalamus shell    | 28–31|
| VMHVL   | Ventromedial hypothalamic nucleus, ventrolateral  | 29–30|
| VMPO    | Ventromedial preoptic nucleus                     | 23–24|
| VNLL    | Ventral nucleus of the lateral lemniscus          | 40   |
| VNTB    | Ventral nucleus of the trapezoid body             | 43–47|
| VO      | Ventral orbital cortex                            | 9–16 |
| VP      | Ventral pallidum                                  | 16–25|
| VPL     | Ventral posterothalamatic nucleus                 | 28–31|
| VPM     | Ventral posterothalamical nucleus                 | 28–32|
| VPPC    | Ventral posterior nucleus of the thalamus         | 31   |
| VRe     | Ventral reuniens thalamic nucleus                 | 27–30|
| VS      | Ventral subiculum                                 | 31–36|
| vsc     | Ventral spinocerebellar tract                     | 43–62|
| VTA     | Ventral tegmental area                            | 37–38|
| VTAR    | Ventral tegmental area, rostral part              | 34–35|
| VTg     | Ventral tegmental nucleus                         | 42   |
| vtpg    | Ventral tegmental decussation                     | 35–37|
| VTM     | Ventral tuberomammillary nucleus                  | 33–34|
| VTT     | Ventral tenia tecta                               | 11–16|
| vVNLL   | Ventral nucleus of the lateral lemniscus, ventral | 41–43|
| X       | X nucleus X                                       | 48–52|
| Xi      | Xiphothalamic nucleus                             | 27–28|
| xscp    | Decussation of the superior cerebellar peduncle   | 39–41|
| Y       | Y nucleus Y                                       | 48   |
| Z       | Z nucleus                                          | 48   |
| ZI      | Zona incerta                                      | 28–29|
| ZIC     | Zona incerta, caudal part                         | 34–34|
| ZID     | Zona incerta, dorsal part                         | 30–33|
| ZIR     | Zona incerta, rostral part                        | 26–27|
| ZIV     | Zona incerta, ventral part                        | 30–33|
| Zo      | Zonal layer of the superior colliculus            | 33–41|
Fig. 4  Anterior–posterior location of the atlas plates on the gerbil brain. Upper panel: view from above. Lower panel: side view. Distance between plates is 350 μm.
| aci | anterior commissure, intrabulbar part |
| clo | dorsal lateral olfactory tract       |
| E   | ependyma and subependymal layer      |
| EPI | external plexiform layer of the olfactory bulb |
| EPIA| external plexiform layer of the accessory olfactory bulb |
| GI  | glomerular layer of the olfactory bulb |
| GIA | glomerular layer of the accessory olfactory bulb |
| GrA | granule cell layer of the accessory olfactory bulb |
| GrO | granular cell layer of the olfactory bulb |
| IPI | internal plexiform layer of the olfactory bulb |
| Io  | lateral olfactory tract              |
| Mi  | mitral cell layer of the olfactory bulb |
| MiA | mitral cell layer of the accessory olfactory bulb |
| ON  | olfactory nerve layer                 |
| OV  | olfactory ventricle (olfactory part of lateral ventricle) |
| aci | anterior commissure, intrabulbar part |
| AOE | anterior olfactory nucleus, external part |
| AOL | anterior olfactory nucleus, lateral part |
| dlo | dorsal lateral olfactory tract |
| E  | ependyma and subependymal layer |
| EPI | external plexiform layer of the olfactory bulb |
| EPIA| external plexiform layer of the accessory olfactory bulb |
| FrA | frontal assoc cortex |
| GI  | glomerular layer of the olfactory bulb |
| GIA | glomerular layer of the accessory olfactory bulb |
| GrA | granule cell layer of the accessory olfactory bulb |
| GrO | granular cell layer of the olfactory bulb |
| IPI | internal plexiform layer of the olfactory bulb |
| Io  | lateral olfactory tract |
| Mi  | mitral cell layer of the olfactory bulb |
| MIA | mitral cell layer of the accessory olfactory bulb |
| ON  | olfactory nerve layer |
| OV  | olfactory ventricle (olfactory part of lateral ventricle) |
| rf  | rhinal fissure |
| ri  | rhinal incisure |
| aci | anterior commissure, intrabulbar part |
|----|--------------------------------------|
| AOD | anterior olfactory nucleus, dorsal part |
| AOE | anterior olfactory nucleus, external part |
| AOL | anterior olfactory nucleus, lateral part |
| AOM | anterior olfactory nucleus, medial part |
| AOV | anterior olfactory nucleus, ventral part |
| dlo | dorsal lateral olfactory tract |
| DLO | dorsolateral orbital cortex |
| E | ependyma and subependymal layer |
| EPI | external plexiform layer of the olfactory bulb |
| EPIA | external plexiform layer of the accessory olfactory bulb |
| FrA | frontal assoc cortex |
| GI | glomerular layer of the olfactory bulb |
| GIA | glomerular layer of the accessory olfactory bulb |
| GrA | granule cell layer of the accessory olfactory bulb |
| GrO | granular cell layer of the olfactory bulb |
| IPI | internal plexiform layer of the olfactory bulb |
| lo | lateral olfactory tract |
| LO | lateral orbital cortex |
| Mi | mitral cell layer of the olfactory bulb |
| MIA | mitral cell layer of the accessory olfactory bulb |
| MO | medial orbital cortex |
| OV | olfactory ventricle (olfactory part of lateral ventricle) |
| PrL | prelimbic cortex |
| rf | rhinal fissure |
| ri | rhinal incisure |
| VO | ventral orbital cortex |
| aci | anterior commissure, intrabulbar part |
|-----|--------------------------------------|
| AOD | anterior olfactory nucleus, dorsal part |
| AOE | anterior olfactory nucleus, external part |
| AOL | anterior olfactory nucleus, lateral part |
| AOM | anterior olfactory nucleus, medial part |
| AOV | anterior olfactory nucleus, ventral part |
| Cg1 | cingulate cortex, area 1 |
| clo | dorsal lateral olfactory tract |
| DLO | dorsolateral orbital cortex |
| E   | ependyma and subependymal layer |
| GI  | glomerular layer of the olfactory bulb |
| GIA | glomerular layer of the accessory olfactory bulb |
| GrA | granule cell layer of the accessory olfactory bulb |
| GrO | granular cell layer of the olfactory bulb |
| IPI | internal plexiform layer of the olfactory bulb |
| Io  | lateral olfactory tract |
| LO  | lateral orbital cortex |
| M2  | secondary motor cortex |
| Mi  | mitral cell layer of the olfactory bulb |
| MO  | medial orbital cortex |
| OV  | olfactory ventricle (olfactory part of lateral ventricle) |
| PrL | prelimbic cortex |
| rf  | rhinal fissure |
| ri  | rhinal incisure |
| VO  | ventral orbital cortex |
| 1 | layer 1 of cortex |
| 2 | layer 2 of cortex |
| 3 | layer 3 of cortex |
| aca | anterior commissure, anterior part |
| Al | agranular insular cortex |
| AOM | anterior olfactory nucleus, medial part |
| AOVP | anterior olfactory nucleus, ventroposterior part |
| Cg1 | cingulate cortex, area 1 |
| Cl | claustrum |
| DEn | dorsal endopiriform nucleus |
| DI | dysgranular insular cortex |
| DP | dorsal peduncular cortex |
| DTr | dorsal transition zone |
| DTT | dorsal tenia tecta |
| E | ependyma and subependymal layer |
| fni | forceps minor of the corpus callosum |
| Fr3 | frontal cortex, area 3 |
| GI | granular insular cortex |
| IEn | intermediate endopiriform nucleus |
| LO | lateral orbital cortex |
| Io | lateral olfactory tract |
| M1 | primary motor cortex |
| M2 | secondary motor cortex |
| MO | medial orbital cortex |
| OV | olfactory ventricle (olfactory part of lateral ventricle) |
| Pir | piriform cortex |
| PrL | prelimbic cortex |
| rf | rhinal fissure |
| S1J | primary somatosensory cortex, jaw region |
| VO | ventral orbital cortex |
| VTT | ventral tenia tecta |
|   |   |
|---|---|
| 1 | layer 1 of cortex |
| 2 | layer 2 of cortex |
| 3 | layer 3 of cortex |
| aca | anterior commissure, anterior part |
| AcbC | accumbens nucleus, core |
| AcbSh | accumbens nucleus, shell |
| AI | agranular insular cortex |
| cg | cingulum |
| Cg1 | cingulate cortex, area 1 |
| CPu | caudate putamen (striatum) |
| DCi | dorsal part of claustrum |
| DEn | dorsal endopiriform nucleus |
| DI | dysgranular insular cortex |
| DP | dorsal peduncular cortex |
| DTT | dorsal tenia tecta |
| E | ependyma and subependymal layer |
| fni | forceps minor of the corpus callosum |
| Fr3 | frontal cortex, area 3 |
| GI | granular insular cortex |
| ICj | islands of Calleja |
| IEn | intermediate endopiriform nucleus |
| IL | infralimbic cortex |
| Io | lateral olfactory tract |
| LV | lateral ventricle |
| M1 | primary motor cortex |
| M2 | secondary motor cortex |
| Nv | navicular nucleus of the basal forebrain |
| Pir | piriform cortex |
| Prl | prelimbic cortex |
| rf | rhinal fissure |
| S1DZ | primary somatosensory cortex, dysgranular zone |
| S1FL | primary somatosensory cortex, forelimb region |
| S1J | primary somatosensory cortex, jaw region |
| Tu | olfactory tubercle |
| VCl | ventral part of claustrum |
| VP | ventral pallidum |
| Code | Term                                      |
|------|-------------------------------------------|
| 1    | layer 1 of cortex                         |
| 2    | layer 2 of cortex                         |
| 3    | layer 3 of cortex                         |
| aca  | anterior commissure, anterior part        |
| AcbC | accumbens nucleus, core                   |
| AcbSh| accumbens nucleus, shell                  |
| AI   | agranular insular cortex                  |
| CB   | cell bridges of the ventral striatum      |
| cc   | corpus callosum                           |
| cg   | cingulum                                   |
| Cg1  | cingulate cortex, area 1                  |
| Cg2  | cingulate cortex, area 2                  |
| CPu  | caudate putamen (striatum)                |
| DCI  | dorsal part of claustrum                  |
| DEn  | dorsal endopiriform nucleus               |
| DI   | dysgranular insular cortex                |
| E    | ependyma and subependymal layer           |
| ec   | external capsule                          |
| GI   | granular insular cortex                   |
| HDB  | nucleus of the horizontal limb of the     |
|      | diagonal band                             |
| ICj  | islands of Calleja                        |
| ICjM | islands of Calleja, major island          |
| IEn  | intermediate endopiriform nucleus         |
| IG   | indusium griseum                          |
| LAcbSh| lateral accumbens shell                   |
| Ld   | lamboid septal zone                       |
| Io   | lateral olfactory tract                   |
| LSD  | lateral septal nucleus, dorsal part       |
| LSJ  | lateral septal nucleus, intermediate part |
| LSV  | lateral septal nucleus, ventral part      |
| LV   | lateral ventricle                         |
| M1   | primary motor cortex                      |
| M2   | secondary motor cortex                    |
| mfb  | medial forebrain bundle                   |
| MS   | medial septal nucleus                     |
| Pir  | piniform cortex                           |
| rf   | rhinal fissure                            |
| S1BF | primary somatosensory cortex, barrel field|
| S1DZ | primary somatosensory cortex, dysgranular |
| zone | zone                                      |
| S1FL | primary somatosensory cortex, forelimb    |
|      | region                                    |
| S1HL | primary somatosensory cortex, hindlimb    |
|      | region                                    |
| S1J  | primary somatosensory cortex, jaw region  |
| S1ULp| primary somatosensory cortex, upper lip   |
|      | region                                    |
| S2   | secondary somatosensory cortex            |
| SHi  | septohippocampal nucleus                  |
| 1  | layer 1 of cortex                      | S2 | secondary somatosensory cortex |
| 2  | layer 2 of cortex                     | SFl| septofimbrial nucleus          |
| 3  | layer 3 of cortex                     | SHi| septohippocampal nucleus       |
| aca| anterior commissure, anterior part    | SHy| septohypothalamic nucleus      |
| AI | agranular insular cortex              | SIB| substantia innominata, basal part |
| CB | cell bridges of the ventral striatum  | ST | bed nucleus of the stria terminalis |
| cc | corpus callosum                       | Tu | olfactory tubercle              |
| cg | cingulum                               | VCI| ventral part of claustrum      |
| Cg1| cingulate cortex, area 1              | VP | ventral pallidum               |
| Cg2| cingulate cortex, area 2              |    |                                |
| CPu| caudate pulamen (striatum)            |    |                                |
| DGi| dorsal part of claustrum              |    |                                |
| DEn| dorsal endopiriform nucleus           |    |                                |
| DI | dysgranular insular cortex            |    |                                |
| E  | ependyma and subependymal layer       |    |                                |
| ec | external capsule                      |    |                                |
| fi | fimbria of the hippocampus            |    |                                |
| Gi | granular insular cortex               |    |                                |
| HDB| nucleus of the horizontal limb of the diagonal band |    |                                |
| ICj| islands of Calleja                    |    |                                |
| IEn| intermediate endopiriform nucleus    |    |                                |
| IG | indusium griseum                      |    |                                |
| IPAC| interstitial nucleus of the posterior limb of the anterior commissure |    |                                |
| lo | lateral olfactory tract               |    |                                |
| LPO| lateral preoptic area                 |    |                                |
| LSD| lateral septal nucleus, dorsal part   |    |                                |
| LSI| lateral septal nucleus, intermediate part |    |                                |
| LSS| lateral stripe of the striatum        |    |                                |
| LSV| lateral septal nucleus, ventral part  |    |                                |
| LV | lateral ventricle                     |    |                                |
| M1 | primary motor cortex                  |    |                                |
| M2 | secondary motor cortex                |    |                                |
| mfb| medial forebrain bundle               |    |                                |
| MnPO| median preoptic nucleus               |    |                                |
| MPA| medial preoptic area                  |    |                                |
| MS | medial septal nucleus                 |    |                                |
| och| optic chiasm                          |    |                                |
| Pir| piriform cortex                       |    |                                |
| rf | rhinal fissure                        |    |                                |
| S1BF| primary somatosensory cortex, barrel field |    |                                |
| S1DZ| primary somatosensory cortex, dysgranular zone |    |                                |
| S1FL| primary somatosensory cortex, forelimb region |    |                                |
| S1HL| primary somatosensory cortex, hindlimb region |    |                                |
| S1ULp| primary somatosensory cortex, upper lip region |    |                                |
| 1 | layer 1 of cortex |
|---|---|
| 2 | layer 2 of cortex |
| 3 | layer 3 of cortex |
| 3V | 3rd ventricle |
| AA | anterior amygdaloid area |
| aca | anterior commissure, anterior part |
| ACo | anterior cortical amygdaloid nucleus |
| acp | anterior commissure, posterior part |
| Al | agranular insular cortex |
| B | basal nucleus (Meynert) |
| BAC | bed nucleus of the anterior commissure |
| cc | corpus callosum |
| cg | cingulum |
| Cg1 | cingulate cortex, area 1 |
| Cg2 | cingulate cortex, area 2 |
| chp | choroid plexus |
| CPu | caudate putamen (striatum) |
| CxA | cortex-amygdala transition zone |
| DCI | dorsal part of claustrum |
| DEn | dorsal endopiriform nucleus |
| DI | dysgranular insular cortex |
| ec | external capsule |
| f | fornix |
| fi | fimbria of the hippocampus |
| GI | granular insular cortex |
| GP | globus pallidus |
| HDB | nucleus of the horizontal limb of the diagonal band |
| I | intercalated nuclei of the amygdala |
| ic | internal capsule |
| IEn | intermediate endopiriform nucleus |
| IG | indusium griseum |
| IPAC | interstitial nucleus of the posterior limb of the anterior commissure |
| Io | lateral olfactory tract |
| LPO | lateral preoptic area |
| LSD | lateral septal nucleus, dorsal part |
| LTer | lemina terminalis |
| LV | lateral ventricle |
| M1 | primary motor cortex |
| M2 | secondary motor cortex |
| MCPO | magnocellular preoptic nucleus |
| mfb | medial forebrain bundle |
| MnPO | median preoptic nucleus |
| MPA | medial preoptic area |
| MPO | medial preoptic nucleus |
| och | optic chiasm |
| Pe | periventricular hypothalamic nucleus |
| Pir | piriform cortex |
| PS | parasubiculum |
| rf | rhinal fissure |
| S1 | primary somatosensory cortex |
| S1BF | primary somatosensory cortex, barrel field |
| S1DZ | primary somatosensory cortex, dysgranular zone |
| S1FL | primary somatosensory cortex, forelimb region |
| S1HL | primary somatosensory cortex, hindlimb region |
| S1ULp | primary somatosensory cortex, upper lip region |
| S2 | secondary somatosensory cortex |
| SFi | septofimbrial nucleus |
| SHy | septohippocampal nucleus |
| SHy | septohypothalamic nucleus |
| SIB | substantia innominata, basal part |
| SO | supragnococystic nucleus |
| st | stria terminalis |
| STLI | bed nucleus of the stria terminalis, lateral division, intermediate part |
| STLP | bed nucleus of the stria terminalis, lateral division, posterior part |
| STLV | bed nucleus of the stria terminalis, lateral division, ventral part |
| STMA | bed nucleus of the stria terminalis, medial division, anterior part |
| STMV | bed nucleus of the stria terminalis, medial division, ventral part |
| TS | triangular septal nucleus |
| VCI | ventral part of claustrum |
| VEn | ventral endopiriform nucleus |
| VLPO | ventrolateral preoptic nucleus |
| VMPO | ventromedial preoptic nucleus |
| VP | ventral pallidum |
| 1 | layer 1 of cortex | LV | lateral ventricle |
| 2 | layer 2 of cortex | M1 | primary motor cortex |
| 3 | layer 3 of cortex | M2 | secondary motor cortex |
| 3V | 3rd ventricle | mch | medial corticohypothalamic tract |
| AA | anterior amygdaloid area | MCPO | magnocellular preoptic nucleus |
| ACo | anterior cortical amygdaloid nucleus | mfb | medial forebrain bundle |
| acp | anterior commissure, posterior part | MPA | medial preoptic area |
| AHA | anterior hypothalamic area, anterior part | MPO | medial preoptic nucleus |
| AI | agranular insular cortex | och | optic chiasm |
| AM | anteromedial thalamic nucleus | PaAP | paraventricular hypothalamic nucleus, anterior parvicellular part |
| AV | anteroventral thalamic nucleus | Pe | paraventricular hypothalamic nucleus |
| B | basal nucleus (Meynert) | Pir | piriform cortex |
| BLA | basolateral amygdaloid nucleus, anterior part | PT | paratenial thalamic nucleus |
| BLV | basolateral amygdaloid nucleus, ventral part | PVA | paraventricular thalamic nucleus, anterior part |
| BMA | basomedial amygdaloid nucleus, anterior part | rf | rhinal fissure |
| cc | corpus callosum | S1 | primary somatosensory cortex |
| CeM | central amygdaloid nucleus, medial division | S1BF | primary somatosensory cortex, barrel field |
| cg | cingulum | S1DZ | primary somatosensory cortex, dysgranular zone |
| Cg1 | cingulate cortex, area 1 | S1HL | primary somatosensory cortex, hindlimb region |
| Cg2 | cingulate cortex, area 2 | S1Sh | primary somatosensory cortex, shoulder region |
| chp | choroid plexus | S1ULp | primary somatosensory cortex, upper lip region |
| CPu | caudate putamen (striatum) | S1 | secondary somatosensory cortex |
| CxA | cortex-amygdala transition zone | S2 | secondary somatosensory cortex |
| DCl | dorsal part of claustrum | SC | suprachiasmatic nucleus |
| DeEn | dorsal endopiriform nucleus | SFI | septifimbrial nucleus |
| Di | dysgranular insular cortex | SFO | subfornical organ |
| EAC | sublenticular extended amygdala, central part | SHy | septohypothalamic nucleus |
| ec | external capsule | SM | stria medullaris of the thalamus |
| f | fornix | SO | supraoptic nucleus |
| fi | fimbria of the hippocampus | st | stria terminalis |
| Gl | granular insular cortex | STMP | bed nucleus of the stria terminalis, medial division, posterior part |
| GP | globus pallidus | TS | triangular septal nucleus |
| HDB | nucleus of the horizontal limb of the diagonal band | VCI | ventral part of claustrum |
| i | intercalated nuclei of the amygdala | VEn | ventral endopiriform nucleus |
| ic | internal capsule | vhc | ventral hippocampal commissure |
| IG | indusium griseum | VP | ventral pallidum |
| IPAC | interstitial nucleus of the posterior limb of the anterior commissure | rVF | interventricular foramen |
| LA | lateroanterior hypothalamic nucleus | LPO | lateral preoptic area |
| Lo | lateral olfactory tract | LSD | lateral septal nucleus, dorsal part |
| LOT | nucleus of the lateral olfactory tract | | |
| STMP | bed nucleus of the stria terminalis, medial division, posterior part | | |
| TS | triangular septal nucleus | | |
| VCI | ventral part of claustrum | | |
| VEn | ventral endopiriform nucleus | | |
| vhc | ventral hippocampal commissure | | |
| VP | ventral pallidum | | |
| Acronym | Description |
|---------|-------------|
| 1       | layer 1 of cortex |
| 2       | layer 2 of cortex |
| 3       | layer 3 of cortex |
| 3v      | 3rd ventricle |
| a13     | A13 dopamine cells |
| af      | anterior auditory field |
| ac      | anterior cortical amygdaloid nucleus |
| ahc     | anterior hypothalamic area, central part |
| ahp     | anterior hypothalamic area, posterior part |
| am      | anteromedial thalamic nucleus |
| angt    | angular thalamic nucleus |
| ans     | accessory neurosecretory nuclei |
| arc     | arcuate hypothalamic nucleus |
| ast     | amygdalostratial transition area |
| au1     | primary auditory cortex |
| au2     | secondary auditory cortex, dorsal area |
| auv     | secondary auditory cortex, ventral area |
| avd     | anteroventral thalamic nucleus, dorsomedial part |
| b       | basal nucleus ( Meynert ) |
| bla     | basolateral amygdaloid nucleus, anterior part |
| blp     | basolateral amygdaloid nucleus, posterior part |
| bmp     | basomedial amygdaloid nucleus, posterior part |
| ca1     | field CA1 of the hippocampus |
| ca2     | field CA2 of the hippocampus |
| ca3     | field CA3 of the hippocampus |
| cc      | corpus callosum |
| cec     | central amygdaloid nucleus, capsular part |
| cel     | central amygdaloid nucleus, lateral division |
| kem     | central amygdaloid nucleus, medial division |
| cg      | cingulum |
| chp     | choroid plexus |
| cl      | centrolateral thalamic nucleus |
| cm      | central medial thalamic nucleus |
| cp      | cerebral peduncle |
| cpu     | caudate putamen ( striatum ) |
| den     | dorsal endopiriform nucleus |
| dhc     | dorsal hippocampal commissure |
| ec      | external capsule |
| ecl     | ectorhinal cortex |
| eml     | external medullary lamina |
| ep      | entopeduncular nucleus |
| f       | fornix |
| fi      | fimbria of the hippocampus |
| fr      | fasciculus retroflexus |
| gp      | globus pallidus |
| grdg    | granular layer of the dentate gyrus |
| i       | intercalated nuclei of the amygdala |
| ic      | internal capsule |
| la      | lateral amygdaloid nucleus, dorsal part |
| laD     | lateral amygdaloid nucleus, dorsal part |
| laV     | lateral amygdaloid nucleus, ventral part |
| lddm    | laterodorsal thalamic nucleus, dorsomedial part |
| ldlv    | laterodorsal thalamic nucleus, ventral part |
| lhb     | lateral habenular nucleus |
| lpia    | lateral parietal association cortex |
| lv      | lateral ventricle |
| m1      | primary motor cortex |
| m2      | secondary motor cortex |
| mdc     | mediodorsal thalamic nucleus, central part |
| mdl     | mediodorsal thalamic nucleus, lateral part |
| mdm     | mediodorsal thalamic nucleus, medial part |
| mepd    | medial amygdaloid nucleus, posterior part |
| mepv    | medial amygdaloid nucleus, posterior part |
| mb      | medial forebrain bundle |
| mhb     | medial habenular nucleus |
| ml      | medial limbic nucleus |
| moDg    | molecular layer of the dentate gyrus |
| mpiA    | medial parietal association cortex |
| mt      | mammillothalamic tract |
| ns      | nigrasilis bundle |
| optic   | optic tract |
| or      | oris layer of the hippocampus |
| pa      | paraventricular hypothalamic nucleus, medial magnocellular part |
| paPM    | paraventricular hypothalamic nucleus, posterior part |
| paXi    | paraxial thalamic nucleus |
| pe      | periventricular hypothalamic nucleus |
| pir     | piriform cortex |
| plco    | posterolateral cortical amygdaloid nucleus |
| plh     | posterolateral part of lateral hypothalamus |
| po      | posterior thalamic nuclear group |
| PoDG    | polymorph layer of the dentate gyrus |
| prh     | perihinal cortex |
| pit     | parietal cortex, posterior area |
| pv      | paraventricular thalamic nucleus |
| py      | pyramidal cell layer of the hippocampus |
| rad     | radius layer of the hippocampus |
| rapir   | rostral amygdaliform area |
| RCh     | retrochiasmatic area |
| re      | reuniens thalamic nucleus |
| rf      | rhinal fissure |
| rh      | rhomboid thalamic nucleus |
| rhd     | retrosplenial dysgranular cortex |
| rsgc    | retrosplenial granular cortex, c region |
| rt      | reticular thalamic nucleus |
| s1      | primary somatosensory cortex |
| s1bf    | primary somatosensory cortex, barrel field |
| s1dz    | primary somatosensory cortex, dysgranular zone |
| s1tr    | primary somatosensory cortex, trunk region |
| s1ulp   | primary somatosensory cortex, upper lip region |
| s2      | secondary somatosensory cortex |
| slu     | stratum lucidum of the hippocampus |
| sm      | stria medularis of the thalamus |
| sox     | supraoptic decussation |
| spa     | subparaventricular zone of the hypothalamus |
| st      | stria terminalis |
| stia    | bed nucleus of the stria terminalis, intraamygdaloid division |
| subd    | submedial thalamic nucleus, dorsal part |
| subv    | submedial thalamic nucleus, ventral part |
| tuLh    | tuberal region of lateral hypothalamus |
| ven     | ventral endopiriform nucleus |
| vl      | ventrolateral thalamic nucleus |
| vm      | ventromedial thalamic nucleus |
| vmh     | ventromedial hypothalamic nucleus |
| vmhsh   | ventromedial nucleus of the hypothalamus shell |
| vpl     | ventral posterolateral thalamic nucleus |
| vpm     | ventral posteromedial thalamic nucleus |
| vrn     | ventral reuniens thalamic nucleus |
| xia     | xiphothalam nucleus |
| zia     | zona incerta |
| Layer | Description |
|-------|-------------|
| 1 | Layer 1 of cortex |
| 2 | Layer 2 of cortex |
| 3 | Layer 3 of cortex |
| 3V | 3rd ventricle |
| A1 | Primary auditory field |
| A11 | A11 dopamine cells |
| AHl | Amygdalo hippocampal area |
| Alv | Alveus of the hippocampus |
| APir | Amygdalo piriform transition area |
| Arct | Arcuate hypothalamic nucleus |
| ASi | Amygdalo stria terminalis area |
| Aur | Primary auditory cortex |
| AuD | Secondary auditory cortex, dorsal area |
| AuV | Secondary auditory cortex, ventral area |
| BLP | Basolateral amygdaloid nucleus, posterior part |
| BMP | Basomedial amygdaloid nucleus, posterior part |
| CA1 | Field CA1 of the hippocampus |
| CA2 | Field CA2 of the hippocampus |
| CA3 | Field CA3 of the hippocampus |
| cc | Corpus callosum |
| cg | Cingulum |
| chp | Choroid plexus |
| CL | Centrolateral thalamic nucleus |
| CM | Central medial thalamic nucleus |
| cp | Cerebral peduncle |
| CPu | Caudate putamen (striatum) |
| DA | Dorsal hypothalamic area |
| dcv | Deep cerebellar white matter |
| DeN | Dorsal endopiriform nucleus |
| DG | Dentine gyrus |
| DHC | Dorsal hippocampal commissure |
| Dlg | Dorsal lateral geniculate nucleus |
| DM | Dorsomedial hypothalamic nucleus |
| ec | External capsule |
| Ect | Ectohentral cortex |
| eml | External medullary lamina |
| f | Fornix |
| flc | Fasciculus cingulum |
| fi | Fimbria of the hippocampus |
| fr | Fasciculus retroflexus |
| GrDG | Granular layer of the dentate gyrus |
| hlf | Hippocampal fissure |
| ic | Internal capsule |
| IG | Insular griseum |
| IMD | Intermediodorsal thalamic nucleus |
| imvc | Intermedioventral thalamic commissure |
| LaD | Lateral amygdaloid nucleus, dorsal part |
| LaV | Lateral amygdaloid nucleus, ventral part |
| LEnt | Lateral entorhinal cortex |
| LHbL | Lateral habenular nucleus, lateral part |
| LHbM | Lateral habenular nucleus, medial part |
| LMoL | Lacunosum molecular layer of the hippocampus |
| LPMR | Lateral posterior thalamic nucleus, mediodorsal part |
| LPiA | Lateral parietal association cortex |
| LV | Lateral ventricle |
| MDC | Mediodorsal thalamic nucleus, central part |
| MDM | Mediodorsal thalamic nucleus, medial part |
| ME | Median eminence |
| MFB | Medial forebrain bundle |
| MHB | Medial habenular nucleus |
| ml | Medial lemniscus |
| MoDG | Molecular layer of the dentate gyrus |
| MPiA | Medial parietal association cortex |
| mt | Mammillothalamic tract |
| MTU | Medial tuberal nucleus |
| ns | Nigrostriatal bundle |
| OPC | Oval paracentral thalamic nucleus |
| OPT | Optic tract |
| Or | Orienties layer of the hippocampus |
| PC | Paracentral thalamic nucleus |
| Pe | Periventricular hypothalamic nucleus |
| PeF | Perifomical nucleus |
| PeFLH | Perifomical part of lateral hypothalamic nucleus |
| PHD | Posterior hypothalamic area, dorsal part |
| Pir | Piriform cortex |
| PLH | Peduncular part of lateral hypothalamic nucleus |
| PMCo | Postero-medial cortical amygdaloid nucleus |
| Po | Posterior thalamic nuclear group |
| PoDG | Polymorph layer of the dentate gyrus |
| PRh | Perihinal cortex |
| PTE | Paraterete nucleus |
| PVP | Paraventricular thalamic nucleus, posterior part |
| Py | Pyramidal cell layer of the hippocampus |
| rad | Radiate layer of the hippocampus |
| RE | Reuniens thalamic nucleus |
| rh | Rhinal fissure |
| Rh | Rhomboid thalamic nucleus |
| RSD | Retrosplenial dysgranular cortex |
| RSGc | Retrosplenial granular cortex, c region |
| RIT | Reticular thalamic nucleus |

**Diagram:**

- **S1:** Primary somatosensory cortex
- **SLu:** Striatum lucidum of the hippocampus
- **Sm:** Stria medullaris of the thalamus
- **Sox:** Supraoptic decussation
- **St:** Stria terminalis
- **Sth:** Subthalamic nucleus
- **Sub:** Subnucleus
- **TuLH:** Tuberal region of lateral hypothalamus
- **VG:** Ventral geniculate nucleus
- **VL:** Ventrolateral thalamic nucleus
- **VM:** Ventromedial thalamic nucleus
- **VMHC:** Ventromedial hypothalamic nucleus, central part
- **VMHDM:** Ventromedial hypothalamic nucleus, dorsomedial part
- **VMHSh:** Ventromedial nucleus of the hypothalamus, shell
- **VMHVL:** Ventromedial hypothalamic nucleus, ventrolateral part
- **VPL:** Ventral posterolateral thalamic nucleus
- **VPM:** Ventral posteromedial thalamic nucleus
- **VRo:** Ventral rostralis thalamic nucleus
- **ZID:** Zona incerta, dorsal part
- **ZIV:** Zona incerta, ventral part
|   | Description                                      |
|---|--------------------------------------------------|
| 1 | layer 1 of cortex                                |
| 2 | layer 2 of cortex                                |
| 3 | layer 3 of cortex                                |
| 3V| 3rd ventricle                                    |
| A1| primary auditory field                           |
| af| amygdaloid fisure                                |
| AHi| amygdalohippocampal area                         |
| alv| alveus of the hippocampus                        |
| APIr| amygdaloinform transition area                   |
| APTD| anterior pretectal nucleus, dorsal part          |
| APTV| anterior pretectal nucleus, ventral part         |
| Arc| arcuate hypothalamic nucleus                     |
| Au1| primary auditory cortex                          |
| AuD| secondary auditory cortex, dorsal area            |
| AuV| secondary auditory cortex, ventral area          |
| BLP| basolateral amygdaloid nucleus, posterior part    |
| CA1| field CA1 of the hippocampus                     |
| CA2| field CA2 of the hippocampus                     |
| CA3| field CA3 of the hippocampus                     |
| cg| cingulum                                         |
| chp| choroid plexus                                   |
| cp| cerebral peduncle                                |
| dw| deep cerebral white matter                       |
| DE| dorsal endopiniform nucleus                      |
| dhp| dorsal hippocampal commissure                    |
| DLG| dorsal lateral geniculate nucleus               |
| DM| dorso medial hypothalamic nucleus                |
| Ect| echorhinical cortex                              |
| Eth| ethmothalamic nucleus                            |
| f| fornix                                           |
| F| nucleus of the fields of Forel                   |
| FC| fasciola cinereum                                |
| fr| fasciolus retroflexuos                           |
| GdG| granular layer of the dentate gyrus              |
| hbc| habenular commissure                             |
| hif| hippocampal fissure                              |
| IG| indusium griseum                                 |
| LEnt| lateral entorhinal cortex                        |
| LMol| lacunosum molecule layer of the hippocampus      |
| LPLC| lateral posterior thalamic nucleus, latero caudal part |
| LPMC| lateral posterior thalamic nucleus, medial caudal part |
| LPMR| lateral posterior thalamic nucleus, mediororal part |
| LV| lateral ventricle                                |
| ME| median eminence                                  |
| MG| medial geniculate nucleus                        |
| mfb| medial forebrain bundle                          |
| ml| medial lemniscus                                 |
| MoDG| molecular layer of the dentate gyrus             |
| MPT| medial pretectal nucleus                         |
| mt| mammillothalamic tract                           |
| rs| nigrostriatal bundle                             |
| OPT| optic tract                                      |
| Or| orians layer of the hippocampus                   |
| OT| nucleus of the optic tract                        |
| pIPAG| p1 infrapialarial gray                           |
| pPRi| p1 reticular formation                           |
| pc| posterior commissure                             |
| PeFLH| perifornical part of lateral hypothalum           |
| PF| parafascicular thalamic nucleus                   |
| PH| posterior hypothalamic nucleus                    |
| Pir| piriform cortex                                  |
| PLH| peduncular part of lateral hypothalum             |
| PMCo| posterior medial cortical amygdaloid nucleus      |
| PMV| premammaryal nucleus, ventral part               |
| Po| posterior thalamic nucleus group                  |
| PoDG| polymorph layer of the dentate gyrus             |
| PR| prerubral field                                  |
| PrC| precommissural nucleus                           |
| PrTh| parastriatumal nucleus                           |
| Py| pyramidal cell layer of the hippocampus           |
| Rad| radial layer of the hippocampus                   |
| rfh| rhinal fissure                                   |
| RI| rostral inferolateral of the medial longitudinal fasciculus |
| RSD| retrosplenial dysgranular cortex                  |
| RSGb| retrosplenial granular cortex, b region           |
| RSGc| retrosplenial granular cortex, c region           |
| Sc| scaphoid thalamic nucleus                         |
| SCC| splenium of the corpus callosum                  |
| SCO| subcommissural organ                             |
| SLe| stratum lucidum of the hippocampus                |
| sxx| suprachioptc decussation                          |
| SPFFC| subparafascicular thalamic nucleus, parcellular part |
| STH| subthalamic nucleus                               |
| str| superior thalamic radiation                      |
| SubG| subgeniculate nucleus                            |
| V1B| primary visual cortex, binocular area             |
| V1M| primary visual cortex, monocural area             |
| V2L| secondary visual cortex, lateral area             |
| V2M| secondary visual cortex, medial area              |

**Images:**

- Plate #32

**Legend:**
- **VGMC**: ventral geniculate nucleus, magnocellular part
- **VGPC**: ventral geniculate nucleus, parvocellular part
- **VPM**: ventral posteromodal thalamic nucleus
- **VS**: ventral subiculum
- **ZID**: zona incerta, dorsal part
- **ZIV**: zona incerta, ventral part
| Abbreviation | Description |
|--------------|-------------|
| 3V           | 3rd ventricle |
| alv          | alevus of the hippocampus |
| APir         | amygdalopfopin transition area |
| APTD         | anterior pretectal nucleus, dorsal part |
| APTV         | anterior pretectal nucleus, ventral part |
| AuD          | secondary auditory cortex, dorsal area |
| AuV          | secondary auditory cortex, ventral area |
| bsc          | brachium of the superior colliculus |
| CA1          | field CA1 of the hippocampus |
| CA3          | field CA3 of the hippocampus |
| cg           | cingulum |
| cp           | cerebral peduncle |
| csc          | commissure of the superior colliculus |
| dca          | deep cerebral white matter |
| dch          | dorsal hippocampal commissure |
| Dk           | nucleus of Darkschewitsch |
| DpG          | deep gray layer of the superior colliculus |
| DpWh         | deep white layer of the superior colliculus |
| DS           | dorsal subiculum |
| Ect          | ectothalamic cortex |
| f            | fornix |
| fnj          | forceps major of the corpus callosum |
| fr           | fasciculus retroflexus |
| GrDG         | granular layer of the dentate gyrus |
| hif          | hippocampal fissure |
| InC          | interstitial nucleus of Cajal |
| InG          | intermediate gray layer of the superior colliculus |
| InWh         | intermediate white layer of the superior colliculus |
| LEnt         | lateral entorhinal cortex |
| LM           | lateral mammillary nucleus |
| LMo1         | lacinus moleculare layer of the hippocampus |
| LPmC         | lateral posterior thalamic nucleus, medioda|lucal part |
| MA3          | medial accessory oculomotor nucleus |
| MCpC         | magnocellular nucleus of the posterior commissure |
| MEnt         | medial entorhinal cortex |
| MGD          | medial geniculate nucleus, dorsal part |
| MGl          | medial geniculate nucleus, medial part |
| MGV          | medial geniculate nucleus, ventral part |
| ml           | medial lemniscus |
| ML           | medial mammillary nucleus, lateral part |
| MM           | medial mammillary nucleus, medial part |
| MnM          | medial mammillary nucleus, median part |
| MoDG         | molecular layer of the dentate gyrus |
| MRe          | mammillary recess of the 3rd ventricle |
| MZMG         | marginal zone of the medial geniculate |
| Op           | optic nerve layer of the superior colliculus |
| Or           | oriens layer of the hippocampus |
| OT           | nucleus of the optic tract |
| p1IPAG       | periaqueductal gray |
| p1RT         | reticular formation |
| pBP          | parabreithal nuclear of the ventral tegmental area |
| pm           | principal mammillary tract |
| PoDG         | polymorph layer of the dentate gyrus |
| PoT          | posterior thalamic nuclear group, triangular part |
| PP           | peripenducular nucleus |
| PPT          | posterior pretectal nucleus |
| PR           | prerenral field |
| PreW         | pre-Edinger-Westphal nucleus |
| Prh          | perihinal cortex |
| Py           | pyramidal cell layer of the hippocampus |
| Rad          | radiatum layer of the hippocampus |
| Rh           | rhinal fissure |
| RSD          | retrosplenial dysgranular cortex |
| RSGb         | retrosplenial granular cortex, b region |
| RSGc         | retrosplenial granular cortex, c region |
| TG           | tectal gray |
| SCO          | subcommisural organ |
| SG           | suprageniculate thalamic nucleus |
| SNC          | substantia nigra, compact part |
| SNr          | substantia nigra, reticular part |
| SuG          | superficial gray layer of the superior colliculus |
| SuML         | supramamillary nucleus, lateral part |
| SuMM         | supramamillary nucleus, medial part |
| sumx         | supramamillary decussation |
| tmt          | tectum |
| V1B          | primary visual cortex, binocular area |
| V1M          | primary visual cortex, monocular area |
| V2L          | secondary visual cortex, lateral area |
| V2M          | secondary visual cortex, medial area |
| VG           | ventral geniculate nucleus |
| VS           | ventral subiculum |
| VTAR         | ventral tegmental area, rostral part |
| VTM          | ventral tuberomammillary nucleus |
| ZIC          | zona incerta, caudal part |
| Zo           | zonal layer of the superior colliculus |
| Abb | Description |
|-----|-------------|
| alv | alveus of the hippocampus |
| APir | amygdalopituitary transition area |
| APT | anterior pretectal nucleus |
| Aq | aqueduct |
| AuD | secondary auditory cortex, dorsal area |
| AuV | secondary auditory cortex, ventral area |
| bsc | brachium of the superior colliculus |
| CA1 | field CA1 of the hippocampus |
| CEnt | caudomedial entorhinal cortex |
| cp | cerebral peduncle |
| csc | commissure of the superior colliculus |
| dcv | deep cerebellar white matter |
| chc | dorsal hippocampal commissure |
| Dk | nucleus of Darkschewitsch |
| DMPAG | dorsomedial periaqueductal gray |
| DpG | deep gray layer of the superior colliculus |
| DpWh | deep white layer of the superior colliculus |
| DS | dorsal subiculum |
| Ect | ectorhinal cortex |
| fnj | forceps major of the corpus callosum |
| fr | fasciculus retroflexus |
| GrDG | granular layer of the dentate gyrus |
| IF | interfascicular nucleus |
| InC | interstitial nucleus of Cajal |
| InG | intermediate gray layer of the superior colliculus |
| InWh | intermediate white layer of the superior colliculus |
| LEnt | lateral entorhinal cortex |
| LM | lateral mammillary nucleus |
| LMoL | lacunomus molecular layer of the hippocampus |
| LPAG | lateral periaqueductal gray |
| MA3 | medial accessory oculomotor nucleus |
| MEnt | medial entorhinal cortex |
| MGD | medial geniculate nucleus, dorsal part |
| MGM | medial geniculate nucleus, medial part |
| MGV | medial geniculate nucleus, ventral part |
| Ml | medial limbic nucleus |
| MM | medial mammillary nucleus, lateral part |
| Mm | medial mammillary nucleus, medial part |
| MoDG | molecular layer of the dentate gyrus |
| mp | mammillary peduncle |
| MT | medial terminal nucleus of the accessory optic tract |
| MZMG | marginal zone of the medial geniculate |
| Op | optic nerve layer of the superior colliculus |
| Or | orlens layer of the hippocampus |
| OT | nucleus of the optic tract |
| pRt | p1 reticular formation |
| PaR | pararhinal nucleus |
| PaS | parahippocampal gyrus |
| PBP | parabrachial pigmented nucleus of the ventral tegmental area |
| PIL | posterior intralaminar thalamic nucleus |
| PLI | posterior limits thalamic nucleus |
| PrDG | polymorph layer of the dentate gyrus |
| Post | postsubiculair |
| PoT | posterior thalamic nuclear group, triangular part |
| PP | peripeduncular nucleus |
| PPT | posterior pretectal nucleus |
| PrEW | pre-Edinger-Westphal nucleus |
| PrH | perirhinal cortex |
| PrS | presubiculum |
| Py | pyramidal cell layer of the hippocampus |
| Rad | radiatum layer of the hippocampus |
| rhf | rhinal fissure |
| RLI | rostral linear nucleus of the raphe |
| RMC | red nucleus, magnocellular part |
| RPC | red nucleus, parvocellular part |
| RSD | retrosplenial dysgranular cortex |
| RSGa | retrosplenial granular cortex, a region |
| RSGb | retrosplenial granular cortex, b region |
| RSGc | retrosplenial granular cortex, c region |
| SG | supragranular thalamic nucleus |
| SNC | substantia nigra, compact part |
| SNR | substantia nigra, reticular part |
| SuG | superficial gray layer of the superior colliculus |
| TG | tectal gray |
| V1B | primary visual cortex, binocular area |
| V1M | primary visual cortex, monocular area |
| V2L | secondary visual cortex, lateral area |
| V2M | secondary visual cortex, medial area |
| VS | ventral subiculum |
| VTAR | ventral tegmental area, rostral part |
| vfgx | ventral tegmental decussation |
| ZIC | zona incerta, caudal part |
| Zo | zonal layer of the superior colliculus |
| Area | Description |
|------|-------------|
| 3n   | oculomotor nerve |
| 3PC  | oculomotor nucleus, parvicellular part |
| av   | alveus of the hippocampus |
| Aq   | aqueduct |
| AuD  | secondary auditory cortex, dorsal area |
| AuV  | secondary auditory cortex, ventral area |
| BIC  | nucleus of the brachium of the inferior colliculus |
| bic  | brachium of the inferior colliculus |
| CA1  | field CA1 of the hippocampus |
| CEnt | caudomedial entorhinal cortex |
| cp   | cerebral peduncle |
| csc  | commissure of the superior colliculus |
| dcv  | deep cerebellar white matter |
| dch  | dorsal hippocampal commissure |
| dchc | dorsal choroid plexus |
| DLPAG| dorsolateral periaqueductal gray |
| DMPAG| dorsomedial periaqueductal gray |
| DpG  | deep gray layer of the superior colliculus |
| DpWh | deep white layer of the superior colliculus |
| DS   | dorsal subiculum |
| dtgx | dorsal tegmental decussation |
| Ect  | entorhinal cortex |
| EW   | Edinger-Westphal nucleus |
| fnj  | fornix major of the corpus callosum |
| fr   | fasciculus retroflexus |
| GrDG | granular layer of the dentate gyrus |
| IF   | interfascicular nucleus |
| InC  | interstitial nucleus of Cajal |
| InG  | intermediate gray layer of the superior colliculus |
| InWh | intermediate white layer of the superior colliculus |
| IPF  | interpeduncular fossa |
| LEnt | lateral entorhinal cortex |
| LMol | lacunosum moleculare layer of the hippocampus |
| LPS  | lateral periaqueductal gray |
| MEnt | medial entorhinal cortex |
| MGD  | medial geniculate nucleus, dorsal part |
| MGM  | medial geniculate nucleus, medial part |
| MGV  | medial geniculate nucleus, ventral part |
| ml   | medial lemniscus |
| ML   | medial mammillary nucleus, lateral part |
| MoDG | molecular layer of the dentate gyrus |
| mp   | mammillary peduncle |
| mRt  | mesencephalic reticular formation |
| Op   | optic nerve layer of the superior colliculus |
| Or   | oriens layer of the hippocampus |
| PaR  | parabrachial nucleus |
| PaS  | parahippocampal nucleus |
| PIF  | parainterfascicular nucleus of the ventral tegmental area |
| PN   | paranigral nucleus of the ventral tegmental area |
| Post | postsubiculum |
| PRh  | perirhinal cortex |
| PrS  | presubiculum |
| Py   | pyramidal cell layer of the hippocampus |
| Rad  | radiatum layer of the hippocampus |
| Rf   | rhinal fissure |
| RLI  | rostral linear nucleus of the raphe |
| RMC  | red nucleus, magnocellular part |
| RPC  | red nucleus, parvicellular part |
| RSGa | retrosplenial granular cortex, a region |
| RSGb | retrosplenial granular cortex, b region |
| RSGc | retrosplenial granular cortex, c region |
| Su3  | suprageniculate thalamic nucleus |
| SubB | subbrachial nucleus |
| SuG  | superficial gray layer of the superior colliculus |
| V1B  | primary visual cortex, binocular area |
| V1M  | primary visual cortex, monocular area |
| V2L  | secondary visual cortex, lateral area |
| V2M  | secondary visual cortex, medial area |
| VS   | ventral subiculum |
| Zo   | zonal layer of the superior colliculus |
| 3N  | oculomotor nucleus                  | PTg  | pedunculopontine tegmental nucleus |
| aHV | alveus of the hippocampus           | rf    | rhinal fissure                     |
| Aq  | aqueduct                           | RMC   | red nucleus, magnocellular part    |
| bIC | brachium of the inferior colliculus| RRF   | retrorubral field                  |
| CEn | caudomedial entorhinal cortex      | RSD   | retrosplenial dysgranular cortex   |
| CLj | caudal linear nucleus of the raphe | RSGa  | retrosplenial granular cortex, a region |
| cp  | cerebral peduncle                  | RSGb  | retrosplenial granular cortex, b region |
| dw  | deep cerebral white matter         | SNC   | substantia nigra, compact part     |
| dHc | dorsal hippocampal commissure      | SNR   | substantia nigra, reticular part   |
| DLPAG| dorso lateral periaqueductal gray | Str   | subiculum, transition area         |
| DMPAG| dorso medial periaqueductal gray   | Su3   | supraculomotet periaqueductal gray |
| DpG | deep gray layer of the superior colliculus | SubB | subbrachial nucleus               |
| DpWh| deep white layer of the superior colliculus | SuG  | superficial gray layer of the superior colliculus |
| DR  | dorsal raphe nucleus               | TeA   | temporal associatoin cortex        |
| ECIc| external cortex of the inferior colliculus | V1B  | primary visual cortex, binocular area |
| ECt | ectothalamic cortex                | V1M   | primary visual cortex, monocular area |
| EW  | Edinger-Westphal nucleus           | V2L   | secondary visual cortex, lateral area |
| frn | fornix major of the corpus callosum| V2M   | secondary visual cortex, medial area |
| IF  | interfascicular nucleus            | VLPAG | ventrolateral periaqueductal gray  |
| InC | interstitial nucleus of Cajal      | VTA   | ventral tegmental area             |
| InG | intermediate gray layer of the superior colliculus | Zo   | zonal layer of the superior colliculus |
| InWh| intermediate white layer of the superior colliculus |
| 4N  | trochlear nucleus  |
| 4Sh | trochlear nucleus shell region |
| Ag  | aqueduct |
| bic | brachium of the inferior colliculus |
| CEn | caudomedial entorhinal cortex |
| CiC | central nucleus of the inferior colliculus |
| CiLI | caudal linear nucleus of the raphe |
| cp  | cerebral peduncle |
| dCw | deep cerebral white matter |
| DLPAG | dorsolateral periaqueductal gray |
| DMPAG | dorsomedial periaqueductal gray |
| DpG | deep gray layer of the superior colliculus |
| DpWh | deep white layer of the superior colliculus |
| DRD | dorsal raphe nucleus, dorsal part |
| DRL | dorsal raphe nucleus, lateral part |
| DRV | dorsal raphe nucleus, ventral part |
| ECic | external cortex of the inferior colliculus |
| ECt | ectorhinal cortex |
| fmj | forceps major of the corpus callosum |
| InG | intermediate gray layer of the superior colliculus |
| InWh | intermediate white layer of the superior colliculus |
| IPC | interpeduncular nucleus, caudal subnucleus |
| IPi | interpeduncular nucleus, intermediate subnucleus |
| IPL | interpeduncular nucleus, lateral subnucleus |
| ioRt | isthmic reticular formation |
| LEnt | lateral entorhinal cortex |
| II | lateral lemniscus |
| LPAG | lateral periaqueductal gray |
| Me5 | mesencephalic trigeminal nucleus |
| MEnt | medial entorhinal cortex |
| MiTg | microcellular tegmental nucleus |
| mI | medial lemniscus |
| mlf | medial longitudinal fasciculus |
| MnR | median raphe nucleus |
| Op | optic nerve layer of the superior colliculus |
| PaS | parabigeminal nucleus |
| PAG | parabigeminal nucleus |
| PDR | posterodorsal raphe nucleus |
| PMnR | paramedian raphe nucleus |
| Pn | pontine nuclei |
| PnO | pontine reticular nucleus, oral part |
| Post | postsubiculum |
| PrCNF | precuneiform area |
| PrRh | perirhinal cortex |
| Pta | pericollicular tegmental area |

- **PTg**: pedunculopontine tegmental nucleus
- **Rbd**: rhabdomedial nucleus
- **RR**: rhinal fissure
- **RFB**: retrolubar field
- **RSD**: retrosplenial dysgranular cortex
- **RSGa**: retrosplenial granular cortex, a region
- **RSGb**: retrosplenial granular cortex, b region
- **Su3**: supraculomotor periaqueductal gray tegmental nucleus
- **SuG**: superficial gray layer of the superior colliculus
- **TeA**: temporal association cortex
- **Tfp**: transverse fibers of the pons
- **ts**: tectospinal tract
- **V1b**: primary visual cortex, binocular area
- **V1M**: primary visual cortex, monocular area
- **V2L**: secondary visual cortex, lateral area
- **V2M**: secondary visual cortex, medial area
- **VLPAG**: ventrolateral periaqueductal gray
- **xscp**: decussation of the superior cerebellar peduncle
- **Zo**: zonal layer of the superior colliculus
4N  trochlear nucleus
4Sh  trochlear nucleus shell region
Ag  aqueduct
ATg  anterior tegmental nucleus
bic  brachium of the inferior colliculus
CEnt  caudomedial entorhinal cortex
CIC  central nucleus of the inferior colliculus
DCIC  dorsal cortex of the inferior colliculus
dLPAg  dorsolateral periaqueductal gray
dMPAg  dorsomedial periaqueductal gray
dpG  deep gray layer of the superior colliculus
dpWh  deep white layer of the superior colliculus
DRD  dorsal raphe nucleus, dorsal part
dRV  dorsal raphe nucleus, ventral part
eCIC  external cortex of the inferior colliculus
Ect  ectorhinal cortex
InG  intermediate gray layer of the superior colliculus
InLl  intermediate nucleus of the lateral lemniscus
InWh  intermediate white layer of the superior colliculus
Ipc  interpeduncular nucleus, caudal subnucleus
IsRt  isthmic reticular formation
LEnt  lateral entorhinal cortex
Itp  longitudinal fasciculus of the pons
ll  lateral lemniscus
LPAG  lateral periaqueductal gray
mcpp  middle cerebellar peduncle
Me5  mesencephalic trigeminal nucleus
MeEnt  medial entorhinal cortex
ml  medial lemniscus
mlf  medial longitudinal fasciculus
MnR  median raphe nucleus
Op  optic nerve layer of the superior colliculus
Pa4  paratrochlear nucleus
PaS  paraseptal nucleus
PBG  parabigeminal nucleus
PDR  posterodorsal raphe nucleus
PL  paralemniscal nucleus
PMnR  paramedian raphe nucleus
Pn  pontine nuclei
PnO  pontine reticular nucleus, oral part
Post  postsubiculum
PrCnF  precuneiform area
PRh  perirhinal cortex
Pla  pericolluclear tegmental area
PTG  pedunculopontine tegmental nucleus
rf  rhinal fissure
RR  retroorbital nucleus
RSD  retrosplenial dysgranular cortex
RSG  retrosplenial granular cortex
SPTg  subpeduncular tegmental nucleus
SuG  superficial gray layer of the superior colliculus
tsc  tectospinal tract
V1  primary visual cortex
V2L  secondary visual cortex, lateral area
V2M  secondary visual cortex, medial area
VPAG  ventrolateral periaqueductal gray
VNll  ventral nucleus of the lateral lemniscus
xscp  decussation of the superior cerebellar peduncle
Zo  zonal layer of the superior colliculus
| 4Cb | 4th cerebellar lobe |
| 4n  | trochlear nerve    |
| 5Cb | 5th cerebellar lobe|
| 6a  | aqueduct           |
| CIC | central nucleus of the inferior colliculus |
| cic | commissure of the inferior colliculus |
| cII | commissure of the lateral lemniscus |
| CnF | cuneiform nucleus |
| DCIC | dorsal cortex of the inferior colliculus |
| DLPCA | dorsolateral periaqueductal gray |
| DMDA | dorsomedial nucleus of the inferior colliculus |
| DMPGA | dorsomedial periaqueductal gray |
| DNLL | dorsal nucleus of the lateral lemniscus |
| DRD | dorsal raphe nucleus, dorsal part |
| DRV | dorsal raphe nucleus, ventral part |
| dVNL | ventral nucleus of the lateral lemniscus, dorsal part |
| ECIC | external cortex of the inferior colliculus |
| Ect | ectorhinal cortex |
| Ent | entorhinal cortex |
| INLL | intermediate nucleus of the lateral lemniscus |
| iST | isthmic reticular formation |
| LDTg | laterodorsal tegmental nucleus |
| LP | longitudinal fasciculus of the pons |
| II  | lateral lemniscus |
| LPAG | lateral periaqueductal gray |
| mcp | middle cerebellar peduncle |
| MeS | mesencephalic trigeminal nucleus |
| mll | medial lemniscus |
| mlf | medial longitudinal fasciculus |
| MnR | median raphe nucleus |
| MPL | paralemniscal nucleus, medial part |
| PaS | paralaminal nucleus, medial part |
| PDR | posterodorsal raphe nucleus |
| PL | paralemniscal nucleus |
| PLV | periodomesencephalic nucleus, ventral part |
| PMnR | paramedian raphe nucleus |
| Pn | pontine nuclei |
| PrO | pontine reticular nucleus, oral part |
| PRH | prerhinal cortex |
| Pta | pericellular tegmental area |
| PTg | pedunculopontine tegmental nucleus |
| RS  | rubrospinal tract |
| RSM | retrosplenial granular cortex |
| RTg | reticulotegmental nucleus of the pons |
| RTgP | reticulotegmental nucleus of the pons, pericentral part |
| s5  | sensory root of the trigeminal nerve |

**Sag** sagulum nucleus
**scp** superior cerebellar peduncle (brachium conjunctivum)
**SPTg** subpeduncular tegmental nucleus
**ts** tectospinal tract
**V1** primary visual cortex
**VLPG** ventrolateral periaqueductal gray
**Vt** ventral tegmental nucleus
**vVNL** ventral nucleus of the lateral lemniscus, ventral part
The image contains a table of anatomical labels and their corresponding abbreviations. The table includes terms such as "2Cb 2nd cerebellar lobule," "3Cb 3rd cerebellar lobule," and "4Cb 4th cerebellar lobule." Other terms include "PnC pontine reticular nucleus, caudal part," "Ph5DM principal sensory trigeminal nucleus, dorsomedial part," "Ph5VL principal sensory trigeminal nucleus, ventrolateral part," "Psf posterior superior fissure," "PsF posterior superior fissure," "Py pyramidal tract," "Rmg raphe magnus nucleus," and "Rpa raphe pallidus nucleus." The image also contains a note "PLATE 44."
| 2Cb | 2nd cerebellar lobule  |
| 3Cb | 3rd cerebellar lobule  |
| 4Cb | 4th cerebellar lobule  |
| 4V  | 4th ventricle         |
| 5ADi| motor trigeminal nucleus, anterior digastic part |
| 5Cb | 5th cerebellar lobule  |
| 5N  | motor trigeminal nucleus |
| 5Tr | trigeminal transition zone |
| 7n  | facial nerve           |
| A5  | A5 noradrenaline cells |
| cbw | cerebellar white matter |
| CGA | central gray, alpha part |
| CGB | central gray, beta part |
| CGO | central gray, nucleus O |
| CGPn| central gray of the pons |
| chp | choroid plexus          |
| Crus1| crus 1 of the ansiform lobule |
| DLPO| dorsolateral periolivary nucleus |
| DMTg| dorsomedial segmental area |
| DPO | dorsal periolivary nucleus |
| FI  | flocculus               |
| GrC | granule cell layer of cochlear nuclei |
| LC  | locus coeruleus         |
| LNTB| lateral nucleus of the trapezoid body |
| LPB | lateral parabrachial nucleus |
| LPBI| lateral parabrachial nucleus, internal part |
| LR4V| lateral recess of the 4th ventricle |
| LSO | lateral superior olive  |
| LVPO| laterointerolivary nucleus |
| m5  | motor root of the trigeminal nerve |
| mcp | middle cerebellar peduncle |
| Me5 | mesencephalic trigeminal nucleus |
| me5 | mesencephalic trigeminal tract |
| ml  | medial lemniscus        |
| mlf | medial longitudinal fasciculus |
| MNTB| medial nucleus of the trapezoid body |
| MB  | medial parabrachial nucleus |
| MSO | medial superior olive   |
| MVPO| medioventral periolivary nucleus |
| P5  | peritrigeminal zone     |
| pcn | precentral fissure      |
| pcuf| preculminate fissure    |
| PDTg| posterodorsal segmental nucleus |
| PFI | paraflocculus           |
| pfl | paraflocculus sulcus    |
| pfl | posterolateral fissure  |
| Pr5C| pontine reticular nucleus, caudal part |
| Pr5V| pontine reticular nucleus, ventral part |

**Pr5DM** principal sensory trigeminal nucleus, dorsomedial part

**Pr5VL** principal sensory trigeminal nucleus, ventrolateral part

**prf** primary fissure

**psf** posterior superior fissure

**py** pyramidal tract

**RMg** raphé magnus nucleus

**RPa** raphé pallidus nucleus

**rs** rubrospinal tract

**RTg** reticulotegmental nucleus of the pons

**s5** sensory root of the trigeminal nerve

**Sca** sphenoidal cell area, ventral cochlear nucleus

**scp** superior cerebellar peduncle (brachium conjunctivum)

**Sm** simple lobule

**SMV** superior medullary velum

**SPN** superior periolivary nucleus

**Su5** supratrigeminal nucleus

**SubCD** subcoeruleus nucleus, dorsal part

**SubCV** subcoeruleus nucleus, ventral part

**ts** tegmental tract

**th** thalamo-ventralis tract

**tz** tectospinal tract

**tx** decussation of the trapezoid body

**VCA** ventral cochlear nucleus, anterior part

**VNTB** ventral nucleus of the trapezoid body

**vsc** ventral spinocerebellar tract
| 1Cb | 1st cerebellar lobule (lingula) | pfs | parafloccular sulcus |
|-----|--------------------------------|-----|---------------------|
| 3Cb | 3rd cerebellar lobule          | pf  | posterior lateral fissure |
| 4Cb | 4th cerebellar lobule          | PnC | pontine reticular nucleus, caudal part |
| 4V  | 4th ventricle                  | PnV | pontine reticular nucleus, ventral part |
| 5Cb | 5th cerebellar lobule          | Pr  | prepositus nucleus   |
| 6Cb | 6th cerebellar lobule          | Pr5DM | principal sensory trigeminal nucleus, dorosomedial part |
| 6n  | abducens nerve                 |     |                     |
| 6N  | abducens nucleus               | Pr5VL | principal sensory trigeminal nucleus, ventrolateral part |
| 7n  | facial nerve                   |     |                     |
| 8n  | vestibulocochlear nerve        | prf | primary fissure      |
| A5  | A5 noradrenaline cells         | psf | posterior superior fissure |
| cbw | cerebellar white matter        | py  | pyramidal tract      |
| chp | choroid plexus                 | RfP | raphe interpositus nucleus |
| Crus1| crus 1 of the ansiform lobule | RMg | raphe magnus nucleus |
| DLP | doros lateral periventricular nucleus | RPa | raphe pallidus nucleus |
| DPO | dorsal periventricular nucleus | rs  | rubrospinal tract    |
| EVe | nucleus of origin of efferents of the | s5 | sensory root of the trigeminal nerve |
|     | vestibular nerve                | scp | superior cerebellar peduncle (brachium conjunctivum) |
| Fi  | flocculus                      | SIm | simple lobule        |
| g7  | genu of the facial nerve       |     |                     |
| Gca | globular cell area, ventral cochlear nucleus | Simf | simplex fissure |
| Gl  | giganto cellular reticular nucleus | SMV | superior medullary velum |
| GRC | granule cell layer of cochlear nuclei | SPN | superior periventricular nucleus |
| icp | inferior cerebellar peduncle (restiform body) | SuVe | superior vestibular nucleus |
| IntA| interposed cerebellar nucleus, anterior part | ts | tectospinal tract |
| IntDL| interposed cerebellar nucleus, dorsolateral hump | txx | decussation of the tectospinal body |
| IRI | intermediate reticular nucleus | VCA | ventral cochlear nucleus, anterior part |
| Lat | lateral (dentate) cerebellar nucleus | VCP | ventral cochlear nucleus, posterior part |
| LatPC| lateral cerebellar nucleus, parvocellular part | VCP | vestibulocerebellar nucleus |
| LNTB| lateral nucleus of the trapezoid body | VNTB | ventral nucleus of the trapezoid body |
| LR4V| lateral recess of the 4th ventricle | vsc | ventral spino cerebellar tract |
| LSO | lateral superior olive         |     |                     |
| LVe | lateral vestibular nucleus     |     |                     |
| LVPO| lateroventral periventricular nucleus |     |                     |
| Med | medial (fastigial) cerebellar nucleus |     |                     |
| ml  | medial lemniscus               |     |                     |
| mlf | medial longitudinal fasciculus |     |                     |
| MNTB| medial nucleus of the trapezoid body |     |                     |
| MSO | medial superior olive          |     |                     |
| MVeMC| medial vestibular nucleus, magnocellular part |     |                     |
| MVePC| medial vestibular nucleus, parvocellular part |     |                     |
| MVPO| medioventral periventricular nucleus |     |                     |
| Oca | octopus cell area, ventral cochlear nucleus |     |                     |
| Pa6 | parabulldens nucleus           |     |                     |
| PCrt| parvocellular reticular nucleus |     |                     |
| pcf | preulminate fissure            |     |                     |
| PFI | paraflocculus                  |     |                     |
| 1Cb | 1st cerebellar lobe (lingula) |
| 3Cb | 3rd cerebellar lobe |
| 4Cb | 4th cerebellar lobe |
| 4V | 4th ventricle |
| 5Cb | 5th cerebellar lobule |
| 5SoL | trigeminal-solitary transition zone |
| 6Cb | 6th cerebellar lobule |
| 7DI | facial nucleus, dorsal intermediate subnucleus |
| 7DL | facial nucleus, dorsolateral subnucleus |
| 7DM | facial nucleus, dorsomedial subnucleus |
| 7VI | facial nucleus, ventral intermediate subnucleus |
| 7VM | facial nucleus, ventromedial subnucleus |
| 8n | vestibulocochlear nerve |
| asc7 | ascending fibers of the facial nerve |
| cbw | cerebellar white matter |
| chp | choroid plexus |
| CPO | caudal periolfactory nucleus |
| Crus1 | crus 1 of the ansiform lobule |
| DCFu | dorsal cochlear nucleus, fusiform layer |
| DCMo | dorsal cochlear nucleus, molecular layer |
| DMSsp | dorsomedial spinal trigeminal nucleus |
| DPGi | dorsal paragigantocellular nucleus |
| Fl | flocculus |
| g7 | genu of the facial nerve |
| Gca | globular cell area, ventral cochlear nucleus |
| Gi | gigantocellular reticular nucleus |
| GIA | gigantocellular reticular nucleus, alpha part |
| GrC | granule cell layer of cochlear nuclei |
| icp | inferior cerebellar peduncle (restiform body) |
| IntA | interposed cerebellar nucleus, anterior part |
| IntDL | interposed cerebellar nucleus, dorsolateral hump |
| IntDM | interposed cerebellar nucleus, dorsomedial crest |
| lRt | intermediate reticular nucleus |
| Lat | lateral (dentate) cerebellar nucleus |
| LatPC | lateral cerebellar nucleus, parvicellular part |
| LPGa | lateral paragigantocellular nucleus, alpha part |
| LPGae | lateral paragigantocellular nucleus, external part |
| LR4V | lateral recess of the 4th ventricle |
| LVe | lateral vestibular nucleus |

Med | medial (fastigial) cerebellar nucleus |
ml | medial lemniscus |
mf | medial longitudinal fasciculus |
MVeMC | medial vestibular nucleus, magnocellular part |
MVePC | medial vestibular nucleus, parvocellular part |
Oca | octopus cell area, ventral cochlear nucleus |
P7 | periaqueductal gray |
PCRt | parvicellular reticular nucleus |
PFi | paraflocculus |
Pfi | parafloccular sulcus |
prf | posterolateral fissure |
Pr | prepositus nucleus |
RIP | raphe interpositus nucleus |
RMg | raphe magnus nucleus |
RPa | raphe pallidus nucleus |s | rubrospinal tract |
scp | superior cerebellar peduncle (brachium conjunctivum) |
Sgm | simple lobule |
simf | simplex fissure |
spS | spinal trigeminal tract |
SpSO | spinal trigeminal nucleus, oral part |
SpVe | spinal vestibular nucleus |
ts | tectospinal tract |
tz | trapezoid body |
VCP | ventral cochlear nucleus, posterior part |
VeCo | vestibulocerebellar nucleus |
vene | vestibulonocerebellar tract |
vec | ventral spinocerebellar tract |
X | nucleus X |
Y | nucleus Y |
| Abbreviation | Full Name |
|--------------|-----------|
| 3Cb          | 3rd cerebellar lobe |
| 4Cb          | 4th cerebellar lobe |
| 4V           | 4th ventricle |
| 5Cb          | 5th cerebellar lobe |
| 5Sol         | trigeminal-solitary transition zone |
| 6Cb          | 6th cerebellar lobe |
| 7DI          | facial nucleus, dorsal intermediate subnucleus |
| 7DL          | facial nucleus, dorsolateral subnucleus |
| 7DM          | facial nucleus, dorsomedial subnucleus |
| 7L           | facial nucleus, lateral subnucleus |
| 7VI          | facial nucleus, ventral intermediate subnucleus |
| 7VM          | facial nucleus, ventromedial subnucleus |
| cbw          | cerebellar white matter |
| chp          | choroid plexus |
| Cop          | copule of the pyramids |
| Crus1        | crus 1 of the ansiform lobe |
| Crus2        | crus 2 of the ansiform lobe |
| das          | dorsal acoustic stria |
| DCDp         | dorsal cochlear nucleus, deep core |
| DCFu         | dorsal cochlear nucleus, fusiform layer |
| DCMo         | dorsal cochlear nucleus, molecular layer |
| DMSp6        | dorsomedial spinal trigeminal nucleus |
| DPGi         | dorsal paragigantocellular nucleus |
| Gca          | globular cell area, ventral cochlear nucleus |
| Gi           | gigantocellular reticular nucleus |
| GA           | gigantocellular reticular nucleus, alpha part |
| GRC          | granule cell layer of cochlear nuclei |
| icf          | intercuneal fissure |
| icp          | inferior cerebellar peduncle (restiform body) |
| IntA         | interposed cerebellar nucleus, anterior part |
| IntDL        | interposed cerebellar nucleus, dorsolateral hump |
| IntDM        | interposed cerebellar nucleus, dorsomedial crest |
| IntP         | interposed cerebellar nucleus, posterior part |
| IntPPC       | interposed cerebellar nucleus, posterior parvicellular part |
| IRI          | intermediate reticular nucleus |
| Lat          | lateral (dentate) cerebellar nucleus |
| LGPA         | lateral paragigantocellular nucleus, alpha part |
| LGGE         | lateral paragigantocellular nucleus, external part |
| LR4V         | lateral recess of the 4th ventricle |
| LVe          | lateral vestibular nucleus |
| Med          | medial (fastigial) cerebellar nucleus |
| MedDL        | medial cerebellar nucleus, dorsolateral protuberance |
| ml           | medial lemniscus |
| mlf          | medial longitudinal fasciculus |
| MVeMC        | medial vestibular nucleus, magnocellular part |
| MVePC        | medial vestibular nucleus, parvicellular part |
| Oca          | octopus cell area, ventral cochlear nucleus |
| PCG          | periventricular zone |
| PCRt         | parvicellular reticular nucleus |
| PFI          | paraflocculus |
| PFS          | parafloccular sulcus |
| PM           | paramedian lobule |
| Pr           | prepositus nucleus |
| prf          | primary fissure |
| py           | pyramidal tract |
| RMg          | raphae magnus nucleus |
| RPA          | raphae pallidus nucleus |
| rs           | rubrospinal tract |
| scp          | superior cerebellar peduncle (brachium conjunctivum) |
| Sim          | simple lobule |
| Simf         | simplex fissure |
| Sol          | nucleus of the solitary tract |
| spS          | spinal trigeminal tract |
| SpSi         | spinal trigeminal nucleus, interpolar part |
| SpSO         | spinal trigeminal nucleus, oral part |
| SpVe         | spinal vestibular nucleus |
| ts           | tectospinal tract |
| tz           | trapezoid body |
| VCP          | ventral cochlear nucleus, posterior part |
| Vesc         | vestibulocerebellar nucleus |
| X            | ventral spinocerebellar tract |
| Xe           | nucleus X |
| Code | Description                          |
|------|-------------------------------------|
| 4V   | 4th ventricle                       |
| 5Cb  | 5th cerebellar lobe                 |
| 5Sol | trigeminal-solitary transition zone |
| 6Cb  | 6th cerebellar lobe                 |
| 7DI  | facial nucleus, dorsal intermediate subnucleus |
| 7DL  | facial nucleus, dorsolateral subnucleus |
| 7DM  | facial nucleus, dorsomedial subnucleus |
| 7L   | facial nucleus, lateral subnucleus |
| 7VI  | facial nucleus, ventral intermediate subnucleus |
| 7VM  | facial nucleus, ventromedial subnucleus |
| 9Cb  | 9th cerebellar lobe                 |
| 10Cb | 10th cerebellar lobe (nodule)       |
| cbw  | cerebellar white matter             |
| chp  | choroid plexus                      |
| Cop  | copula of the pyramids              |
| Crus1| crus 1 of the ansiform lobule       |
| Crus2| crus 2 of the ansiform lobule       |
| das  | dorsal acoustic stria               |
| DCDp | dorsal cochlear nucleus, deep core |
| DCFu | dorsal cochlear nucleus, fusiform layer |
| DCMo | dorsal cochlear nucleus, molecular layer |
| DSMP6| dorsomedial spinal trigeminal nucleus |
| DPGI | dorsal paragigantocellular nucleus |
| Gi   | gigantocellular reticular nucleus    |
| GA   | gigantocellular reticular nucleus, alpha part |
| GrC  | granule cell layer of cochlear nuclei |
| icf  | intercuneal fissure                |
| lcp  | inferior cerebellar peduncle (restiform body) |
| IntDL| interposed cerebellar nucleus, dorsolateral hump |
| IntDM| interposed cerebellar nucleus, dorsomedial crest |
| IntP | interposed cerebellar nucleus, posterior part |
| IntPPC| interposed cerebellar nucleus, posterior parvicellular part |
| IRt  | intermediate reticular nucleus      |
| LPGA | lateral paragigantocellular nucleus, alpha part |
| LPG/E| lateral paragigantocellular nucleus, external part |
| LR4V | lateral recess of the 4th ventricle |
| Med  | medial (fastigial) cerebellar nucleus |
| MedDL| medial cerebellar nucleus, dorsolateral protuberance |
| MedL | medial cerebellar nucleus, lateral part |
| mL   | medial lemniscus                    |
| mlf  | medial longitudinal fasciculus      |
| MVEMC| medial vestibular nucleus, magnocellular part |
| MVEPC| medial vestibular nucleus, parvicellular part |
| Mx   | matrix region of the medulla        |
| oc   | olivocerebellar tract               |
| P7   | perifacial zone                     |
| PCRT | parvicellular reticular nucleus     |
| PFI  | paraflocculus                       |
| PFS  | parafloccular sulcus                |
| PFG  | posteroventral fissure              |
| PM   | paramedian lobule                   |
| PMS  | paramedian sulcus                   |
| PPy  | parapyramidal nucleus               |
| Pr   | prepositus nucleus                  |
| prf  | primary fissure                     |
| py   | pyramidal tract                     |
| RMG  | raphae magnus nucleus               |
| ROB  | raphae obscurus nucleus             |
| RPA  | raphae pallidus nucleus             |
| RS   | rubrospinal tract                   |
| Sol  | nucleus of the solitary tract       |
| Sp5  | spinal trigeminal tract             |
| Sp5l | spinal trigeminal nucleus, interpolar part |
| Sp5O | spinal trigeminal nucleus, oral part |
| SpVe | spinal vestibular nucleus           |
| ts   | tectospinal tract                   |
| vso  | ventral spinocerebellar tract       |
| X    | nucleus X                           |
| 4V  | 4th ventricle                      |
|-----|-----------------------------------|
| 5Sol| trigeminal-solitary transition zone |
| 6Cb | 6th cerebellar lobe               |
| 7Cb | 7th cerebellar lobe               |
| 7L  | facial nucleus, lateral subnucleus |
| 8Cb | 8th cerebellar lobe               |
| 9Cb | 9th cerebellar lobe               |
| 10Cb| 10th cerebellar lobe (nodule)     |
| 12N | hypoglossal nucleus               |
| cbw | cerebellar white matter           |
| chp | choroid plexus                    |
| Cop | copula of the pyramids            |
| Crus1| crus 1 of the ansiform lobule      |
| Crus2| crus 2 of the ansiform lobule      |
| DMSp5| dorsomedial spinal trigeminal nucleus |
| DPGi| dorsal paragigantocellular nucleus |
| GI  | gigantocellular reticular nucleus  |
| GIA | gigantocellular reticular nucleus, alpha part |
| GIV | gigantocellular reticular nucleus, ventral part |
| icf | intercral fissure                 |
| icp | inferior cerebellar peduncle (restiform body) |
| IRt | intermediate reticular nucleus     |
| Li  | linear nucleus of the medulla     |
| LPGi| lateral paragigantocellular nucleus |
| LR4V| lateral recess of the 4th ventricle |
| ml  | medial lemniscus                  |
| mlf | medial longitudinal fasciculus    |
| MVeMC| medial vestibular nucleus, magnocellular part |
| MVePC| medial vestibular nucleus, parvocellular part |
| Mx  | matrix region of the medulla      |
| oc  | olivocerebellar tract             |
| P7  | perical zone                      |
| PCRt| parvocellular reticular nucleus   |
| plf | posterolateral fissure            |
| PM  | paramedian lobule                 |
| prms| paramedian suclus                 |
| pprf| prepyramidal fissure              |
| Pr  | prepositus nucleus                |
| py  | pyramidal tract                   |
| RMg | raphe magnus nucleus              |
| ROcb| raphe obscurus nucleus            |
| RPa | raphe pallidus nucleus            |
| rs  | rubrospinal tract                 |
| Sol | nucleus of the solitary tract     |
| sol | solitary tract                    |
| sp5 | spinal trigeminal tract           |
| Code | Name                                      | Abbreviation |
|------|-------------------------------------------|--------------|
| 4V   | 4th ventricle                             | pff          |
| 5Sol | trigeminal-solitary transition zone       | Pr           |
| 6Cb  | 6th cerebellar lobe                       | psf          |
| 7Cb  | 7th cerebellar lobe                       | py           |
| 8Cb  | 8th cerebellar lobe                       | Ro           |
| 9Cb  | 9th cerebellar lobe                       | Rp           |
| 9cCb | 9th cerebellar lobe, a                    | ROb          |
| 9bCb | 9th cerebellar lobe, b                    | RPa          |
| 10Cb | 10th cerebellar lobe (nodule)             | Sol          |
| 10n  | vagus nerve                               | sol          |
| 10N  | dorsal motor nucleus of vagus             | spS          |
| 12N  | hypoglossal nucleus                       | SpSi         |
| AmbC | ambiguous nucleus, compact part           | SpVe         |
| apmf | ansoparamedian fissure                    | ts           |
| Bo   | Bötzinger complex                         | vsc          |
| cbw  | cerebellar white matter                   | X            |
| chp  | choroid plexus                            |              |
| Cop  | copula of the pyramids                    |              |
| Crus1| crus 1 of the ansiform lobule             |              |
| Crus2| crus 2 of the ansiform lobule             |              |
| Cu   | cuneate nucleus                           |              |
| CVL  | caudoventrolateral reticular nucleus      |              |
| DMSP | dorsomedial spinal trigeminal nucleus     |              |
| dsc  | dorsal spinocerebellar tract              |              |
| ECu  | external cuneate nucleus                  |              |
| FVe  | F cell group of the vestibular complex    |              |
| Gi   | gigantocellular reticular nucleus         |              |
| GIv  | gigantocellular reticular nucleus, ventral|              |
| icf  | intercuneal fissure                       |              |
| icp  | inferior cerebellar peduncle (restiform body)|        |
| IOC  | inferior olive, dorsal nucleus            |              |
| IODM | inferior olive, dorsomedial cell group    |              |
| ICM  | inferior olive, medial nucleus            |              |
| IOPr | inferior olive, principal nucleus         |              |
| IRt  | intermediate reticular nucleus            |              |
| Li   | linear nucleus of the medulla             |              |
| LPGi | lateral paragigantocellular nucleus       |              |
| ml   | medial lemniscus                          |              |
| mlf  | medial longitudinal fasciculus            |              |
| MVeMC| medial vestibular nucleus, magnocellular part|        |
| MVePC| medial vestibular nucleus, parvocellular part|        |
| Mx   | matrix region of the medulla              |              |
| cc   | olivocerebellar tract                     |              |
| PCRt | parvocellular reticular nucleus           |              |
| plf  | posterolateral fissure                    |              |
| PM   | paramedian lobule                         |              |
| pms  | paramedian sulcus                         |              |
| Acronym | Description                                      |
|---------|--------------------------------------------------|
| 4V      | 4th ventricle                                   |
| sSol    | trigeminal-solitary transition zone             |
| 6Cb     | 6th cerebellar lobule                           |
| 7Cb     | 7th cerebellar lobule                           |
| 8Cb     | 8th cerebellar lobule                           |
| 8aCb    | 9th cerebellar lobule, a                       |
| 9Cb     | 9th cerebellar lobule, b                       |
| 9cCb    | 9th cerebellar lobule, c                       |
| 10Cb    | 10th cerebellar lobule (nodule)                |
| 10N     | dorsal motor nucleus of vagus                  |
| 12N     | hypoglossal nucleus                             |
| 12n     | hypoglossal nerve                               |
| AmbSC   | ambiguous nucleus, subcompact part             |
| apmf    | ansoparamean fissure                           |
| cbw     | cerebellar white matter                        |
| chp     | choroid plexus                                  |
| Cop     | copule of the pyramis                           |
| Crus1   | crus 1 of the ansiform lobule                  |
| Crus2   | crus 2 of the ansiform lobule                  |
| Cu      | cuneate nucleus                                 |
| cu      | cuneate fasciculus                              |
| CVL     | caudovenoteral reticular nucleus               |
| DMSP5   | dorsomedial spinal trigeminal nucleus          |
| dsc     | dorsal spinocerebellar tract                   |
| ECu     | external cuneate nucleus                       |
| Gi      | gigantocellular reticular nucleus              |
| icf     | intercrural fissure                            |
| icp     | inferior cerebellar peduncle (restiform body)  |
| IOD     | inferior olive, dorsal nucleus                 |
| IODM    | inferior olive, dorsomedial cell group         |
| IOM     | inferior olive, medial nucleus                 |
| IOPr    | inferior olive, principal nucleus              |
| IRT     | intermediate reticular nucleus                 |
| Li      | linear nucleus of the medulla                 |
| LGi     | lateral paragigantocellular nucleus            |
| ml      | medial lemniscus                                |
| mlf     | medial longitudinal fasciculus                 |
| MVe     | medial vestibular nucleus                      |
| Mx      | matrix region of the medulla                   |
| oc      | olivocerebellar tract                          |
| PCRt    | parvicellular reticular nucleus                |
| pfl     | posterolateral fissure                         |
| PM      | paramedian lobule                              |
| pms     | paramedian sulcus                              |
| ppf     | prepyramidal fissure                           |
| Pr      | prepositus nucleus                              |
| psf     | posterior superior fissure                     |
| py      | pyramidal tract                                 |
| Ro      | nucleus of Roller                              |
| Abbreviation | Description |
|--------------|-------------|
| 4V           | 4th ventricle |
| SSol         | trigeminal-solitary transition zone |
| 6Cb          | 6th cerebellar lobe |
| 7Cb          | 7th cerebellar lobe |
| 8Cb          | 8th cerebellar lobe |
| 9Cb          | 9th cerebellar lobe |
| 9hCb         | 9th cerebellar lobe, b |
| 9cCb         | 9th cerebellar lobe, c |
| 10Cb         | 10th cerebellar lobe (nodule) |
| 10N          | dorsal motor nucleus of vagus |
| 12N          | hypoglossal nucleus |
| 12n          | hypoglossal nerve |
| AmbSC        | ambiguous nucleus, subcompact part |
| apmf         | ansoparamedian fissure |
| cbw          | cerebellar white matter |
| chp          | choroid plexus |
| Cop          | colpus of the pyramids |
| Crus1        | crus 1 of the ansiform lobule |
| Crus2        | crus 2 of the ansiform lobule |
| Cu           | cuneate nucleus |
| cu           | cuneate fasciculus |
| DMSp5        | dorsomedial spinal trigeminal nucleus |
| dsc          | dorsal spinocerebellar tract |
| ECu          | external cuneate nucleus |
| Gi           | gigantocellular reticular nucleus |
| Gr           | gracle nucleus |
| gr           | gracle fasciculus |
| icf          | intercrural fissure |
| IOD          | inferior olive, dorsal nucleus |
| IODM         | inferior olive, dorsomedial cell group |
| IOM          | inferior olive, medial nucleus |
| IOPr         | inferior olive, principal nucleus |
| IRI          | intermediata reticular nucleus |
| LRT          | lateral reticular nucleus |
| ml           | medial lemniscus |
| mlf          | medial longitudinal fasciculus |
| Mx           | matrix region of the medulla |
| oc           | olivocerebellar tract |
| PSol         | parasolitary nucleus |
| Pa5          | paratrigeminal nucleus |
| PCRt         | parvicellular reticular nucleus |
| pf           | posterolateral fissure |
| PM           | paramedian lobule |
| pms          | paramedian sulcus |
| ppf          | prepyramidal fissure |
| psf          | posterior superior fissure |
| py           | pyramidal tract |
| Ro           | nucleus of Roller |

**Diagram Description**

- **PLATE 8, 54**: The image shows a detailed anatomical view of the brain structures, with annotations for various parts of the cerebellum and surrounding areas, including the cerebellar lobes, the ansiform lobules, and the cranial nerves. Key parts are labeled with abbreviations, and the diagram provides a visual reference for understanding the regional anatomy as described in the text.
| Abbr. | Description |
|-------|-------------|
| 5Sol  | trigeminal-solitary transition zone |
| 7Cb   | 7th cerebellar lobe |
| 8Cb   | 8th cerebellar lobe |
| 9eCb  | 9th cerebellar lobe, a |
| 9bCb  | 9th cerebellar lobe, b |
| 8cCb  | 9th cerebellar lobe, c |
| 10Cb  | 10th cerebellar lobe (nodule) |
| 10N   | dorsal motor nucleus of vagus |
| 12N   | hypoglossal nucleus |
| 12n   | hypoglossal nerve |
| AmbL  | ambiguus nucleus, loose part |
| AP    | area postrema |
| apmf  | ansaprameidian fissure |
| cbw   | cerebellar white matter |
| CC    | central canal |
| Cop   | copula of the pyramids |
| Crus2 | crus 2 of the ansiform lobe |
| Cu    | cuneate nucleus |
| cu    | cuneate fasciculus |
| CuR   | cuneate nucleus, rotundus part |
| dsc   | dorsal spinoocerebellar tract |
| ECu   | external cuneate nucleus |
| Gr    | gracile nucleus |
| gr    | gracile fasciculus |
| IOD   | inferior olive, dorsal nucleus |
| IODM  | inferior olive, dorsomedial cell group |
| IOM   | inferior olive, medial nucleus |
| IOPr  | inferior olive, principal nucleus |
| IRI   | intermediate reticular nucleus |
| LRI   | lateral reticular nucleus |
| LRISS | lateral reticular nucleus, subtrigeminal part |
| MdD   | medullary reticular nucleus, dorsal part |
| MdV   | medullary reticular nucleus, ventral part |
| mlf   | medial longitudinal fasciculus |
| Mx    | matrix region of the medulla |
| Pa5   | paragigantocellular nucleus |
| pif   | posterolateral fissure |
| PM    | paramedian lobule |
| pms   | paramedian sulcus |
| ppr   | prepyramidal fissure |
| PSol  | parasolitary nucleus |
| py    | pyramidal tract |
| Ro    | nucleus of Rollier |
| ROb   | raphe obscurus nucleus |
| RPa   | raphe pallidus nucleus |
| rs    | rubrospinal tract |
| sf    | secondary fissure |
| Abb | Name |
|-----|------|
| 7Cb | 7th cerebellar lobule |
| 8Cb | 8th cerebellar lobule |
| 9aCb | 9th cerebellar lobule, a |
| 9bCb | 9th cerebellar lobule, b |
| 9cCb | 9th cerebellar lobule, c |
| 10N | dorsal motor nucleus of vagus |
| 12N | hypoglossal nucleus |
| 12h | hypoglossal nerve |
| AP | area postrema |
| cbw | cerebellar white matter |
| CC | central canal |
| CeCu | central cervical nucleus of the spinal cord |
| Cop | copula of the pyramids |
| Cu | cuneate nucleus |
| cu | cuneate fasciculus |
| CuR | cuneate nucleus, rostrum part |
| dsc | dorsal spinocerebellar tract |
| ECu | external cuneate nucleus |
| Gr | gracile nucleus |
| gr | gracile fasciculus |
| IOB | inferior olive, subnucleus B of medial nucleus |
| IOBe | inferior olive, beta subnucleus |
| IOC | inferior olive, subnucleus C of medial nucleus |
| IOD | inferior olive, dorsal nucleus |
| IOK | inferior olive, cap of Kooy of the medial nucleus |
| IOPr | inferior olive, principal nucleus |
| IRT | intermediate reticular nucleus |
| LRT | lateral reticular nucleus |
| LRIPC | lateral reticular nucleus, parvicellular part |
| LRISS | lateral reticular nucleus, subparvocellular part |
| MdD | medullary reticular nucleus, dorsal part |
| MdV | medullary reticular nucleus, ventral part |
| mlf | medial longitudinal fasciculus |
| mlx | medial lemniscal decussation |
| Mx | matrix region of the medulla |
| PaS | paratrigeminal nucleus |
| PM | paramedian lobule |
| ppf | prepyramidal fissure |
| py | pyramidal tract |
| RAMb | retrolenticular nucleus |
| Ro | nucleus of Roller |
| ROb | raphe obscurus nucleus |
| RPa | raphe pallidus nucleus |
| rs | rubrospinal tract |
| sf | secondary fissure |
| sol | solitary tract |

nucleus of the solitary tract, commissural part
nucleus of the solitary tract, dorsolateral part
nucleus of the solitary tract, medial part
nucleus of the solitary tract, ventral part
nucleus of the solitary tract, ventrolateral part
spinal trigeminal tract
spinal trigeminal nucleus, caudal part
spinal trigeminal nucleus, interpolar part
tectospinal tract
uvular fissure
ventral spinocerebellar tract
| 8Cb  | 8th cerebellar lobule                       | SoIV | solitary nucleus, ventral part
| 9aCb | 9th cerebellar lobule, a                   | SoIVL| nucleus of the solitary tract, ventrolateral part
| 9bCb | 9th cerebellar lobule, b                   | sp5  | spinal trigeminal tract
| 9cCb | 9th cerebellar lobule, c                   | Sp5C | spinal trigeminal nucleus, caudal part
| 10N  | dorsal motor nucleus of vagus             | ts   | tectospinal tract
| 12GH | hypoglossal nucleus, geniculothyroid part | uf   | uvular fissure
| 12N  | hypoglossal nucleus                       | vsc  | ventral spinoerebellar tract
| cbw  | cerebellar white matter                   |      | 
| CC   | central canal                             |      | 
| CeCv | central cervical nucleus of the spinal cord | | 
| Cop  | copula of the pyramids                    |      | 
| Cu   | cuneate nucleus                           |      | 
| cu   | cuneate fasciculus                        |      | 
| dsc  | dorsal spinoerebellar tract               |      | 
| Ge5  | gelatinous layer of the caudal spinal trigeminal nucleus | | 
| Gr   | gracile nucleus                           |      | 
| gr   | gracile fasciculus                        |      | 
| IB   | interstitial nucleus of the medulla       |      | 
| IOA  | inferior olive, subnucleus A of medial nucleus |  | 
| IOB  | inferior olive, subnucleus B of medial nucleus | | 
| IOBe | inferior olive, beta subnucleus           |      | 
| IOC  | inferior olive, subnucleus C of medial nucleus | | 
| IOK  | inferior olive, cap of Kooy of the medial nucleus | | 
| IRt  | intermediate reticular nucleus            |      | 
| LRT  | lateral reticular nucleus                 |      | 
| LRIPC| lateral reticular nucleus, parvicellular part |  | 
| MdD  | medullary reticular nucleus, dorsal part  |      | 
| MdV  | medullary reticular nucleus, ventral part |      | 
| mlf  | medial longitudinal fasciculus            |      | 
| Mx   | matrix region of the medulla              |      | 
| Obex | obex                                      |      | 
| Pa5  | paratrigeminal nucleus                    |      | 
| py   | pyramidal tract                           |      | 
| pyx  | pyramidal decussation                     |      | 
| RAmb | retroambiguous nucleus                    |      | 
| ROb  | raphe obscurus nucleus                    |      | 
| RPa  | raphe pallidus nucleus                    |      | 
| rs   | rubrospinal tract                         |      | 
| sf   | secondary fissure                         |      | 
| sol  | solitary tract                            |      | 
| SoIC | nucleus of the solitary tract, commissural part | | 
| SoIL | solitary nucleus, dorsolateral part       |      | 
| SoIM | nucleus of the solitary tract, medial part |      | 

**Image:** An axial MRI slice showing the brainstem and cerebellum with labeled structures.
| Abbr  | Full Form                                                                 |
|-------|---------------------------------------------------------------------------|
| SeCb  | 9th cerebellar lobule, a                                                 |
| 9bCb  | 9th cerebellar lobule, b                                                 |
| 9cCb  | 9th cerebellar lobule, c                                                 |
| CC    | central canal                                                            |
| CeCv  | central cervical nucleus of the spinal cord                              |
| Cu    | cuneate nucleus                                                          |
| cu    | cuneate fasciculus                                                       |
| dsc   | dorsal spinoocerebellar tract                                            |
| Ge5   | gelatinous layer of the caudal spinal trigeminal nucleus                 |
| Gr    | gracile nucleus                                                          |
| gr    | gracile fasciculus                                                       |
| iB    | interstitial nucleus of the medulla                                      |
| iRt   | intermediate reticular nucleus                                           |
| LRT   | lateral reticular nucleus                                                |
| MdD   | medullary reticular nucleus, dorsal part                                 |
| MdV   | medullary reticular nucleus, ventral part                                |
| mlf   | medial longitudinal fasciculus                                           |
| MxA   | median accessory nucleus of the medulla                                  |
| Mx    | matrix region of the medulla                                             |
| pyx   | pyramidal decussation                                                    |
| rs    | rubrospinal tract                                                        |
| SolC  | nucleus of the solitary tract, commissural part                          |
| SolM  | nucleus of the solitary tract, medial part                               |
| sp5   | spinal trigeminal tract                                                  |
| Sp5C  | spinal trigeminal nucleus, caudal part                                   |
| ts    | tectospinal tract                                                        |
| uf    | uvular fissure                                                           |
| vsc   | ventral spinoocerebellar tract                                           |
| 11N | accessory nerve nucleus |
| CC | central canal |
| CeCv | central cervical nucleus of the spinal cord |
| Cu | cuneate nucleus |
| cu | cuneate fasciculus |
| dcs | dorsal corticospinal tract |
| dsc | dorsal spinocerebellar tract |
| Ge5 | gelatinous layer of the caudal spinal trigeminal nucleus |
| Gr | gracile nucleus |
| gr | gracile fasciculus |
| IB | interstitial nucleus of the medulla |
| IRt | intermediate reticular nucleus |
| MdD | medullary reticular nucleus, dorsal part |
| MdV | medullary reticular nucleus, ventral part |
| mlf | medial longitudinal fasciculus |
| MnA | median accessory nucleus of the medulla |
| pyx | pyramidal decussation |
| rs | rubrospinal tract |
| SoIC | nucleus of the solitary tract, commissural part |
| sp5 | spinal trigeminal tract |
| SpSC | spinal trigeminal nucleus, caudal part |
| ts | tectospinal tract |
| vsc | ventral spinocerebellar tract |
| Abbreviation | Description |
|--------------|-------------|
| 11N          | accessory nerve nucleus |
| CC           | central canal |
| CeCv         | central cervical nucleus of the spinal cord |
| Cu           | cuneate nucleus |
| cu           | cuneate fasciculus |
| dcs          | dorsal corticospinal tract |
| dsc          | dorsal spinocebellar tract |
| Ge5          | gelatinous layer of the caudal spinal trigeminal nucleus |
| Gr           | gracile nucleus |
| gr           | gracile fasciculus |
| IB           | interstitial nucleus of the medulla |
| IRt          | intermediate reticular nucleus |
| MdD          | medullary reticular nucleus, dorsal part |
| MdV          | medullary reticular nucleus, ventral part |
| mlf          | medial longitudinal fasciculus |
| MnA          | median accessory nucleus of the medulla |
| pyx          | pyramidal decussation |
| rs           | rubrospinal tract |
| SoIC         | nucleus of the solitary tract, commissural part |
| sp5          | spinal trigeminal tract |
| SpSC         | spinal trigeminal nucleus, caudal part |
| ts           | tectospinal tract |
| vsc          | ventral spinocebellar tract |
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Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

Ethical approval All experiments were in agreement with the NIH Guide for the Care and Use of Laboratory Animals (2011) and the guidelines of the European Communities Council Directive (86/609/EEC) and approved by the animal care committee of Sachsen-Anhalt, Germany.

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