Supplementary Table 2. Summary of monosynaptic rabies tracing data.

| Cortex (Bregma +2.2 → -0.3 mm) | Pons (-4.7 → -5.7 mm) |
|-------------------------------|------------------------|
| Ipsilateral | Contralateral | Ipsilateral | Contralateral |
| M1+++ M1+++ | PnC++ PnC+ | Irt++ Irt++ | PCrTA+ PCrTA+ |
| S1HL/FL+++ S1HL/FL+++ | MveMC+ MveMC+ | SubCD+ SubCD+ | PnO+ PnO+ |
| S1DZ-J++ S1DZ-J++ | mRt+++ mRt+ | PrCnF++ PrCnF+ |
| M2++ M2+ | 5N+ |
| Fr3++ Fr3+ | |

| Amygdala (-0.2 → -1.8 mm) | Cerebellum (-5.7 → -6.8 mm) |
|----------------------------|-------------------------------|
| Ipsilateral | Contralateral | Ipsilateral | Contralateral |
| CeL/C/M++ | Med+++ Med+++ | |
| BLA+ | Lat+++ Lat+++ | |
| EAC+ EAC+ | | |
| AA+ | | |

| Zona Incerta (-1.8 → -2.8 mm) | Medulla (-5.7 → -7.8 mm) |
|-------------------------------|--------------------------|
| Ipsilateral | Contralateral | Ipsilateral | Contralateral |
| ZID++ ZID+ | MdV+ MdV+ | Irt++ Irt+++ | |
| ZIV+ | MdD+ MdD+ | Lrt+ Lrt++ | |
| *Gi+++ Gi+ | | |
| mRt+++ mRt+ | PCrTA+ PCrTA+ | |
| PrCnF+ | LPGi+ LPGi+ | |
| | RMC+ | DPGi+ |

Abbreviations: 5N, motor trigeminal nucleus; AA, anterior amygdaloid area; BLA, basolateral amygdaloid nucleus, anterior part; CeC/L/M, central amygdaloid nucleus, capsular/lateral//medial

*site of primary infection
+ denotes presence of rabies mCherry* neurons
++ small/intermediate number of mCherry* neurons
+++ significant population of mCherry* neurons

See also, Fig. 7 and Extended Data Fig. 7. Qualitative analysis is based on curation of rabies retrograde tracing data from \( n = 6 \) mice (one experiment). Coordinates represent the rostrocaudal extent to which mCherry* neurons were observed in each corresponding structure (e.g. Cortex, Amygdala, etc.). Coordinates and abbreviations are based on Paxinos and Franklin's reference atlas55.
division; DPGi, dorsal paragigantocellular nucleus; DpW, deep white layer of the superior colliculus; EAC, extended amygdala, central part; Fr3, frontal cortex, area 3; Gi/A, gigantocellular reticular nucleus, alpha part; InG/W, intermediate grey/white layer of the superior colliculus; IRt, intermediate reticular nucleus; Lat, lateral cerebellar nucleus; LPGi, lateral paragigantocellular nucleus; Lrt, lateral reticular nucleus; M1, primary motor cortex; M2, secondary motor cortex; MdD/V, medullary reticular nucleus, dorsal/ventral part; Med, medial cerebellar nucleus; mRt, mesencephalic reticular formation; MVeMC, medial vestibular nucleus, magnocellular part; PCrt/A, parvicellular reticular nucleus, alpha part; PnC/O, pontine reticular nucleus, caudal/oral part; PrCnF, precuneiform area; RMC, red nucleus, magnocellular part; S1 DZ/J/HL/FL, primary somatosensory cortex, dysgranular zone/jaw region/hindlimb region/forelimb region, SubCD, subcoeruleus nucleus, dorsal part; ZID/V, zona incerta, dorsal/ventral part.