## Supplementary Table 2

### Primary antibodies

| Antigen | Species | Manufacturer                  | Catalog number | Experiment                                                                 | Figure          | Working concentration |
|---------|---------|--------------------------------|----------------|---------------------------------------------------------------------------|------------------|-----------------------|
| STAT3   | rabbit  | Santa Cruz Biotechnology       | sc-7179        | 5-HT/STAT3 immunofluorescence; STAT3 immunofluorescence in AAV-Cre and AAV-GFP cohorts | 1A, 1B; 4C, 4D  | 1:100                 |
| STAT3   | mouse   | Abcam                         | ab119352       | Iba1/STAT3 immunofluorescence; GFAP/STAT3 immunofluorescence               | 1C, 1D; 1E, 1F  | 1:100                 |
| 5-HT    | goat    | Abcam                         | ab66047        | 5-HT/STAT3 immunofluorescence                                              | 1A, 1B          | 1:200                 |
| Iba1    | rabbit  | FUJIFILM Wako Pure Chemical Corporation | 019-19741     | Iba1/STAT3 immunofluorescence                                              | 1C, 1D          | 1:1000                |
| GFAP    | rabbit  | Sigma-Aldrich                 | G9269          | GFAP/STAT3 immunofluorescence                                              | 1D, 1F          | 1:500                 |
| NeuN    | mouse   | Chemicon/Sigma-Aldrich        | MAB377         | NeuN immunofluorescence                                                    | 4E              | 1:500                 |

### Primers for qRT-PCR

| Target | Forward sequence (5' to 3') | Reverse sequence (5' to 3') |
|--------|-----------------------------|-----------------------------|
| STAT3  | GTTCTCGTCCACCCACCAAGC       | CCTTGCCAGCCATGTTTCTTTTG     |
| β-actin| ATGGTGGGGAATGGGTCAGAAG       | TCTCCATGTCGTCAGTTTGG        |

### Viral vectors

| Group   | Full name                          | Manufacturer | Serotype | Catalog number   | Author           |
|---------|------------------------------------|--------------|----------|------------------|------------------|
| AAV-Cre | pAAV.CMV.HI.eGFP-Cre.WPRE.SV40     | Addgene      | AAV5     | #105545-AAV5     | James M. Wilson  |
| AAV-GFP | pAAV.CMV.PI.EGFP.WPRE.bGH          | Addgene      | AAV5     | #105530-AAV5     | James M. Wilson  |