

**Suppl. Fig. 1 Screening results of rAAV infecting H22 cell line. (A-C)** Representative images were taken with ×200 fluorescent inverted microscopy 72 hours after transfection (A), and EAAT3 relative expression in cells transfected with different rAAV by mRNA (B) and western blot (C) assays (n=3). \*\*P<0.01, \*\*\*P <0.001, vs. HT22. rAAV (recombinant adeno-associated viral); NC(rAAV-shRNA-NC); mSLC1A1-1～4(rAAV-shRNA-SLC1A1-1～4). Bar=50 μm.



**Suppl. Fig. 2 The rAAV spreads to the entire CA region of the hippocampus 21 days after adult mice receiving the hippocampal injection.** GFP indicates cells in the hippocampus transduced with RNAi. rAAV (recombinant adeno-associated viral); GFP (green fluorescent protein); RNAi (RNA interference vector). Bar=100 μm.