

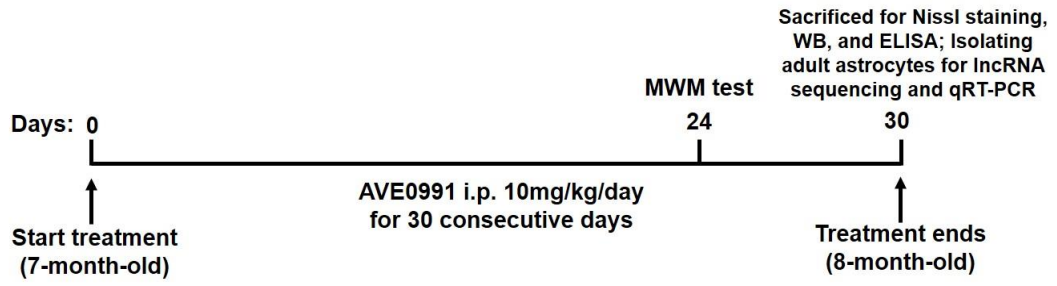
Supplementary Table S1. Primers used for qRT-PCR assay.

Gene names	Forward/Reverse	Sequences 5'-3'
Mouse-SNHG14	Forward	CCTCCCATAATCTGGAGGTTGGT
	Reverse	ACAGGGTGGTAGTCAAGTCATG
Mouse- β -actin	Forward	CCATGTACGTTGCTATCCAG
	Reverse	CTTCATGAGGTAGTCAGTCAG
Mouse-miR-223-3p	Forward	AGCCCGTGTCAGTTTGTCAAAT
	Reverse	CAGTGCAGGGTCCGAGGT
Mouse-U6	Forward	CTCGCTTCGGCAGCACA
	Reverse	AACGCTTACGAATTTGCGT

Supplementary Table S2. Sequences used for cell transfection.

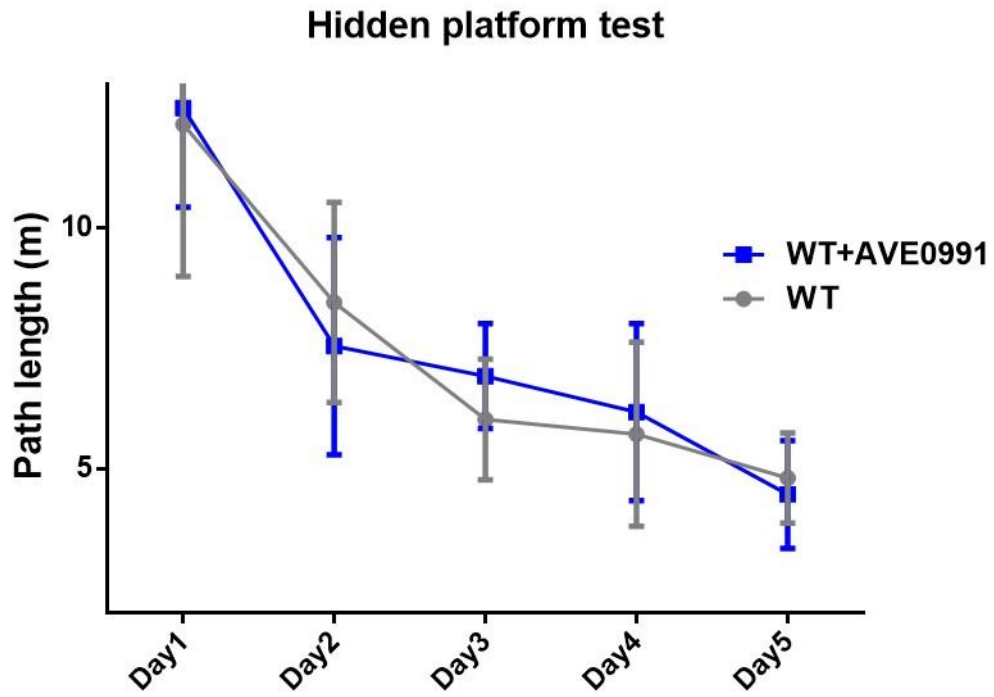
Names	Sequences 5'-3'
Mouse-NC mimic	GGCUCUAGAAAAGCCUAUGC
Mouse-miR-223-3p mimic	UGUCAGUUUGUCAAAUACCCCA
Mouse-NC inhibitor	CAGUACUUUUGUGUAGUACAAA
Mouse-miR-223-3p inhibitor	UGGGGUAAUUUGACAAACUGACA
Mouse-NC siRNA	UUCUCCGAACGUGUCACGUTT
Mouse-SNHG14 siRNA	CUACUACCUAUGACCAUUA

Supplementary Figure S1. A schematic illustration showing the design of *in-vivo* experiments.



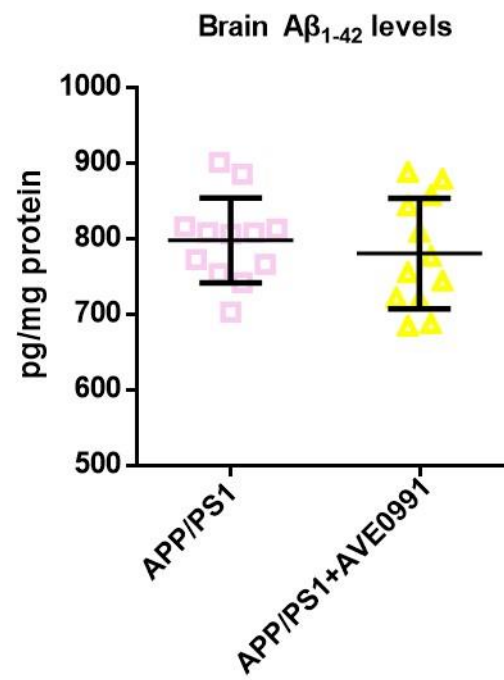
Supplementary Figure S2. The effect of AVE0991 on spatial cognitive functions in WT control.

Data shows the path length of each group in the hidden platform test (n=12 per group). All data are expressed as the means \pm SD.



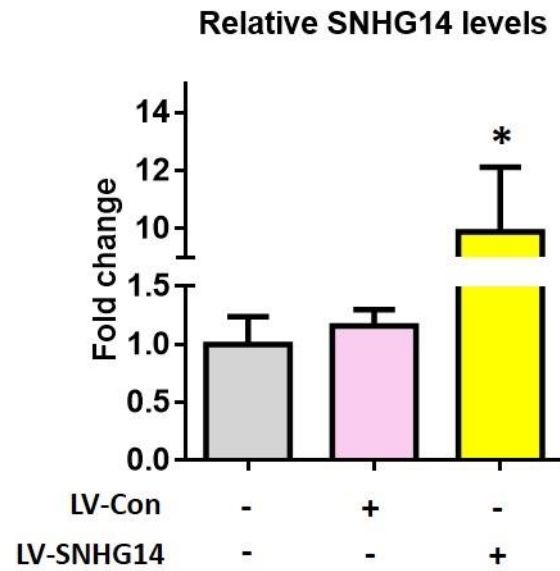
Supplementary Figure S3. The effect of AVE0991 on brain A β_{1-42} levels in APP/PS1 mice. ELISA

assay of A β_{1-42} in the brain (n=6 per group). All data are expressed as the means \pm SD.



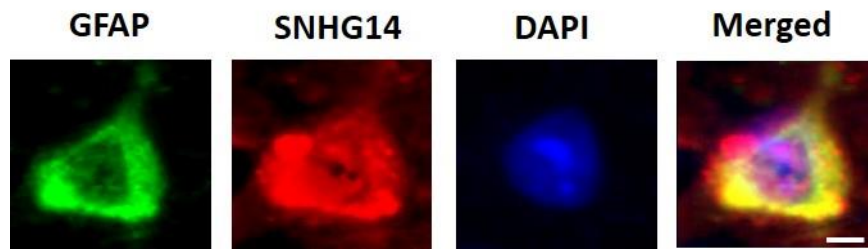
Supplementary Figure S4. The qRT-PCR result of SNHG14 expression in the primary astrocytes.

All data are expressed as the means \pm SD of three independent experiments. * P <0.05 versus the LV-Con group.



Supplementary Figure S5. Subcellular localization of SNHG14 in astrocytes of mouse brain.

SNHG14 was expressed predominately in the cytoplasm of astrocyte. Scale bar=20 μm .



Supplementary Figure S6. The qRT-PCR result of SNHG14 expression in the primary astrocytes.

All data are expressed as the means \pm SD of three independent experiments. * P <0.05 versus the LV-Con group. # P <0.05 versus the Con siRNA group.

