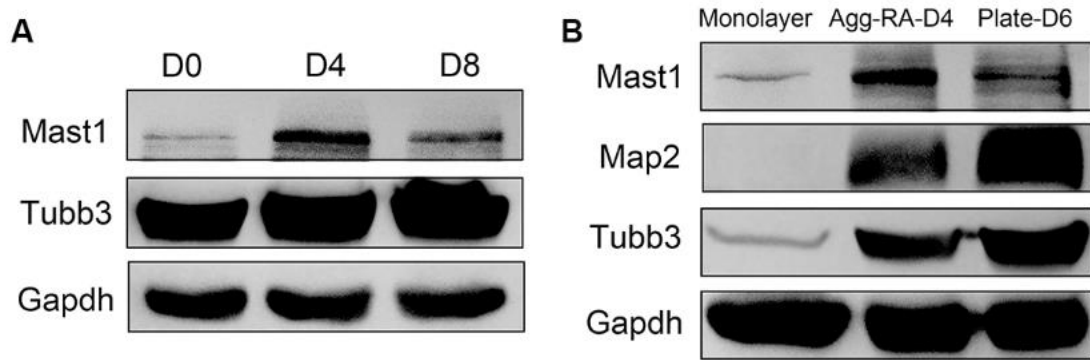


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2 **Supplementary Figure 1.** Western blot analysis of protein expression of the neuronal marker

3 TUBB3, from different phases of SH-SY5Y cell neuronal differentiation. D, day.

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**Supplementary Figure 2.** Induced expression of MAST1 during N<sub>2</sub>a and P19 cell neuronal

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differentiation. (A) Western blot analysis of protein expressions of MAST1 and the neuronal

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markers Tubb3, from different phases of N<sub>2</sub>a cell neuronal differentiation. N<sub>2</sub>a cells which

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had cultured in the presence of 10  $\mu$ M RA for 8 days. (B) Western blot analysis of protein

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expressions of MAST1 and the neuronal markers Tubb3 and Map2, from different phases of

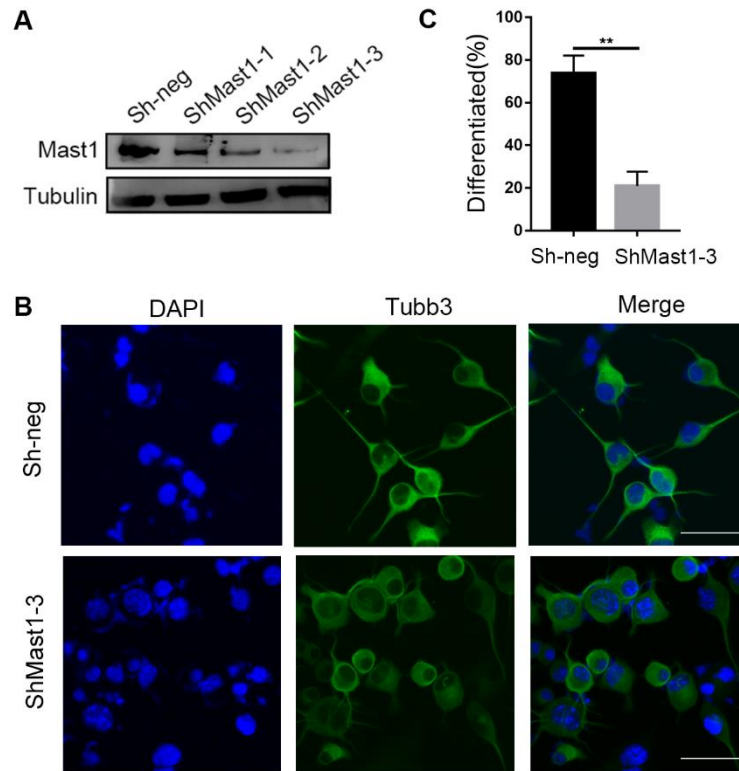
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P19 cell neuronal differentiation. P19 cell aggregated in the presence of 1  $\mu$ M RA for 4 days

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followed by plating on culture dishes for 6 days. Agg, aggregation; D, day.

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15 **Supplementary Figure 3.** RNA interference targeting Mast1 impairs the neuronal  
 16 differentiation of N<sub>2</sub>a cells. (A) Western blot analysis of Mast1 protein expressions in control  
 17 (sh-neg), and shMast1-1, shMast1-2 and shMast1-3 lentiviruses infected N<sub>2</sub>a cells, which  
 18 were cultured in the presence of RA for 4 days. (B) Immunostaining of neuronally  
 19 differentiated N<sub>2</sub>a cells, which were cultured in the presence of RA for 8 days, with anti-  
 20 Tubb3 antibody. (C) The percentage of differentiated N<sub>2</sub>a cells was determined. Scale bars,  
 21 200  $\mu$ m. Data are depicted as means  $\pm$  SD of at least three independent experiments.

22 \*\*P<0.01, as determined by the two-tailed unpaired Student's *t* test.

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