

Substrate-specific activation of α -secretase by 7-deoxy-trans-dihydronarciclasine increases non-amyloidogenic processing of amyloid- β protein precursor

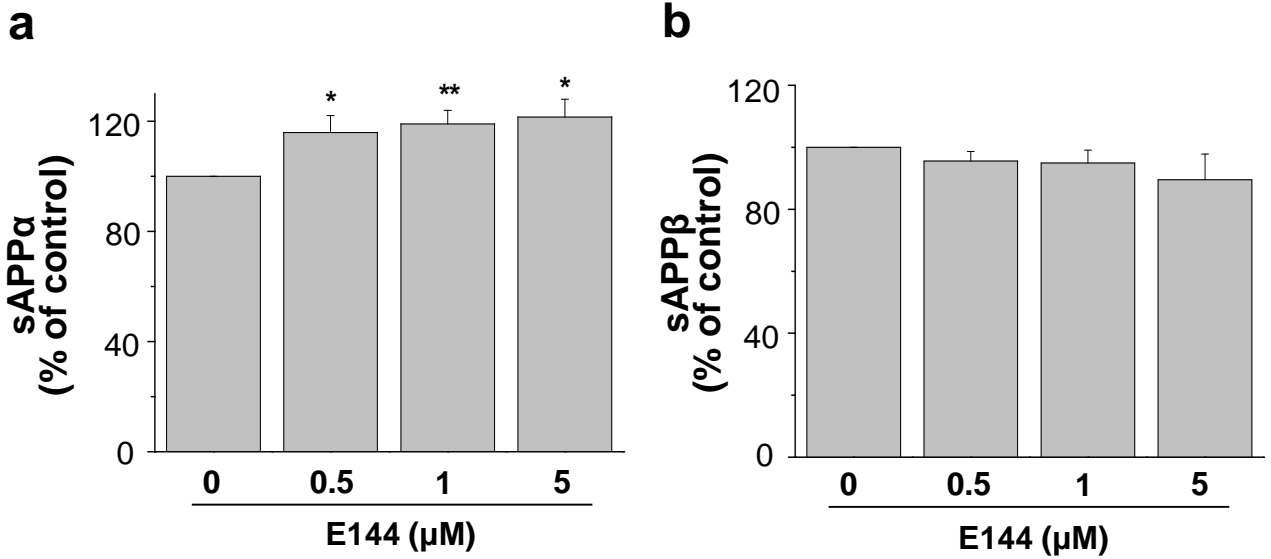
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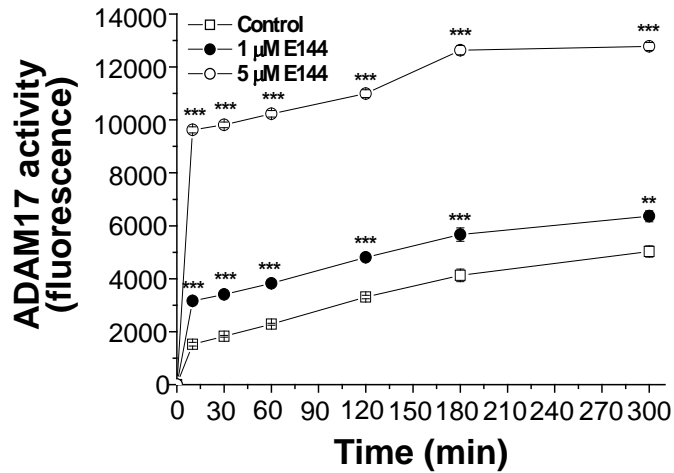
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Supplementary Fig. 1



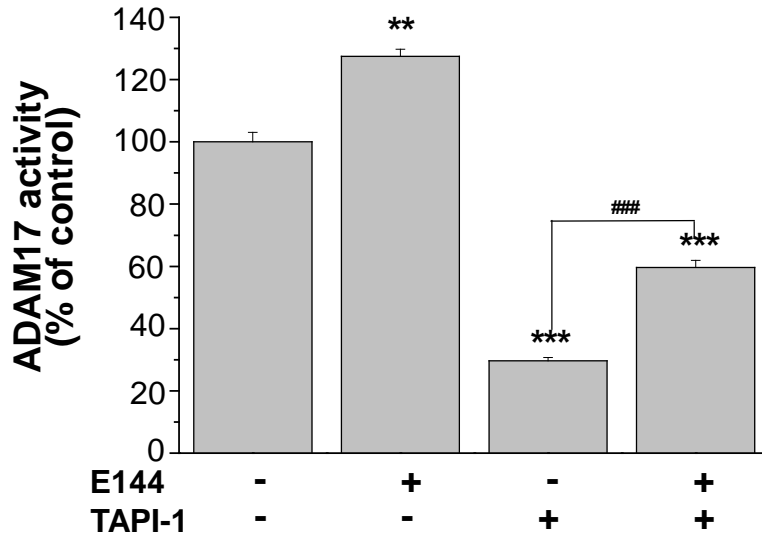
Supplementary Figure 1. E144 increased the secretion of sAPP α and decreased A β from SH-SY5Y cells stably transfected with wild type APP. Cells were incubated with E144 for 1 h. Levels of sAPP α (a) or sAPP β (b) in conditioned media were measured using ELISA. The level of sAPP α was significantly increased by E144 (n = 4). The level of sAPP β was decreased by E144, but without significance (n = 4).

Supplementary Fig. 2



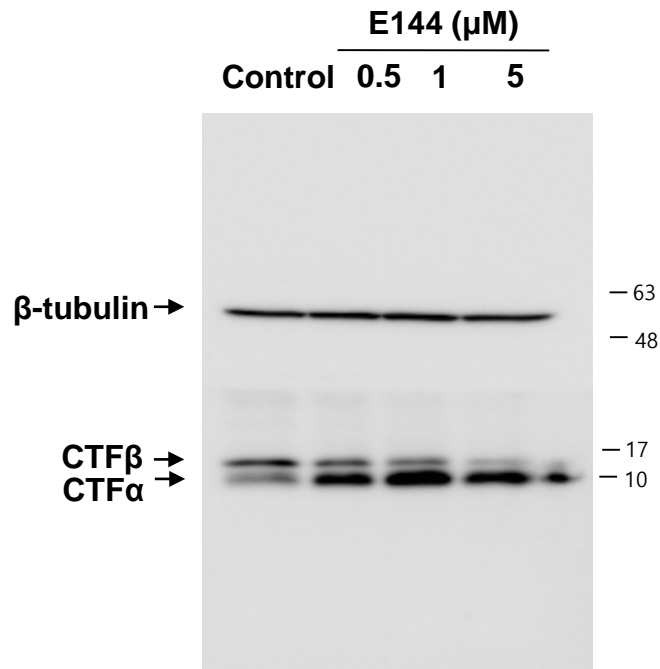
Supplementary Figure 2. E144 increases ADAM17 activity in a time-dependent manner. Human recombinant ADAM17 was used to measure ADAM17 activity as described in Materials and Methods. The presence of 1 or 5 μM E144 significantly increased ADAM17 activity in cell-free assay (n = 4). **, P<0.01; ***, P<0.001.

Supplementary Fig. 3



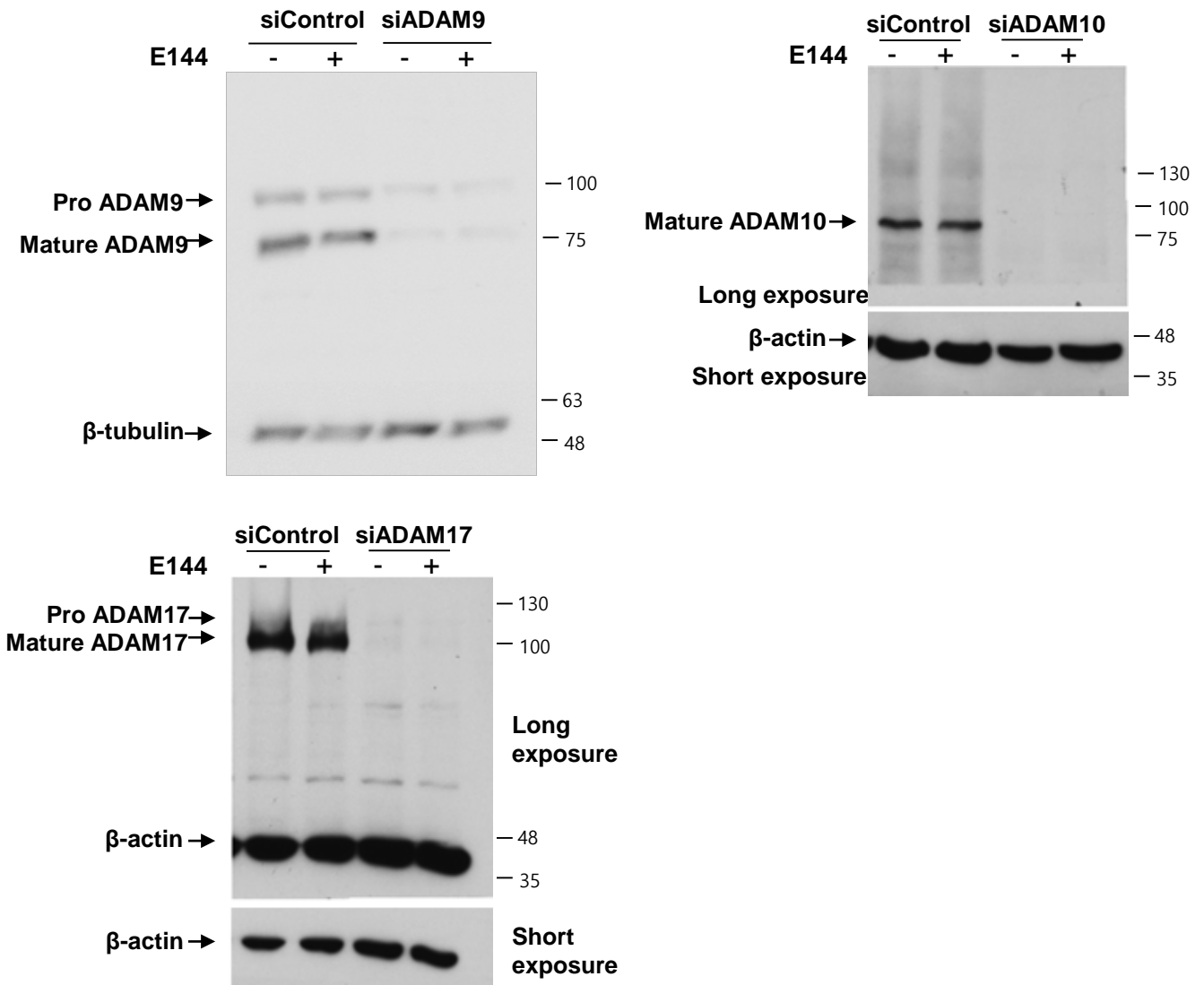
Supplementary Figure 3. The effect of E144 on ADAM17 activation is not abolished by a ADAM17 inhibitor, TAPI-1. Human recombinant ADAM17 was used to measure ADAM17 activity. The presence of 1 μ M E144 increased ADAM17 activity while 50 μ M TAPI-1 inhibited ADAM17 activity. However, the presence of TAPI-1 did not prevent the effect of E144 on ADAM17 activity (n = 4). **, P<0.01 ***, P<0.001 compared to control. ### P<0.001 compared to TAPI-1-treated group.

Supplementary Fig. 4



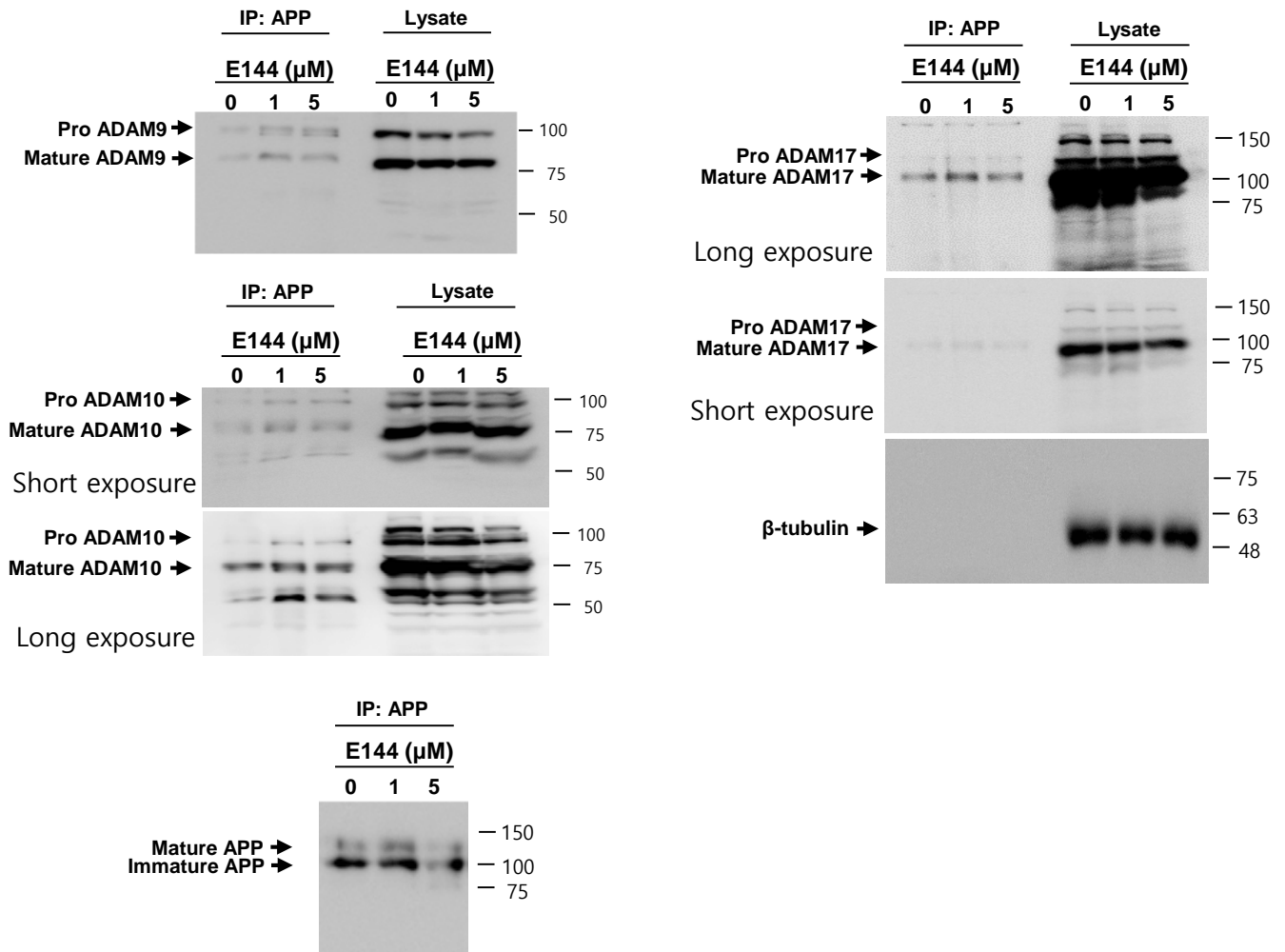
Supplementary Figure 4. Full image of Western blotting for Fig. 2c.

Supplementary Fig. 5



Supplementary Figure 5. Full image of Western blotting for Fig. 6a.

Supplementary Fig. 6



Supplementary Figure 6. Full image of Western blotting for Fig. 7a.