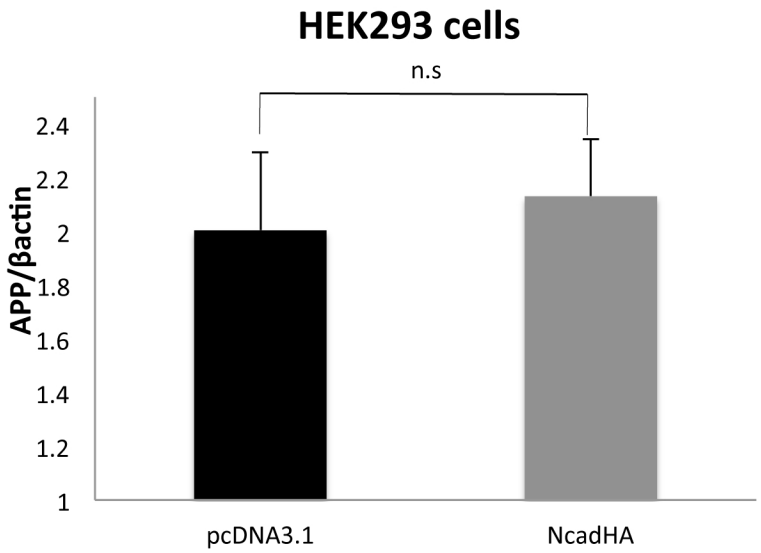
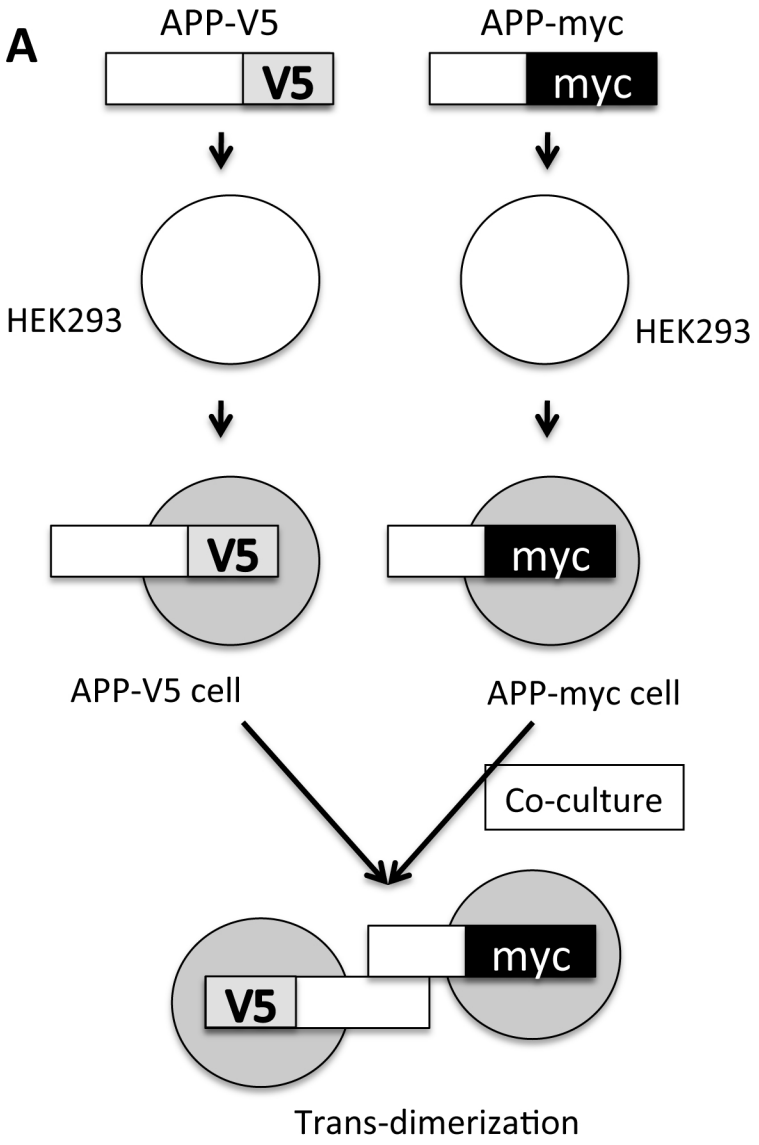
Figure S1. The expression levels of APP were not different between HEK293 cells with or without N-cadherin transfection. HEK293 cells were co-transfected with APP770-myc and APP770-V5 in the presence or absence of NcadHA and were analyzed by western blotting using anti-V5-tags and β-actin antibodies. The band of densities of V5-tag and control β-actin were quantified by NIH Image. The ratio of APP/β-actin (V5-tag/β-actin) was calculated and analyzed by a Student's *t*-test. The ratio of APP/β-actin was not different between HEK293 cells with or without N-cadherin transfection ($p = 0.5732$, $n = 3$).

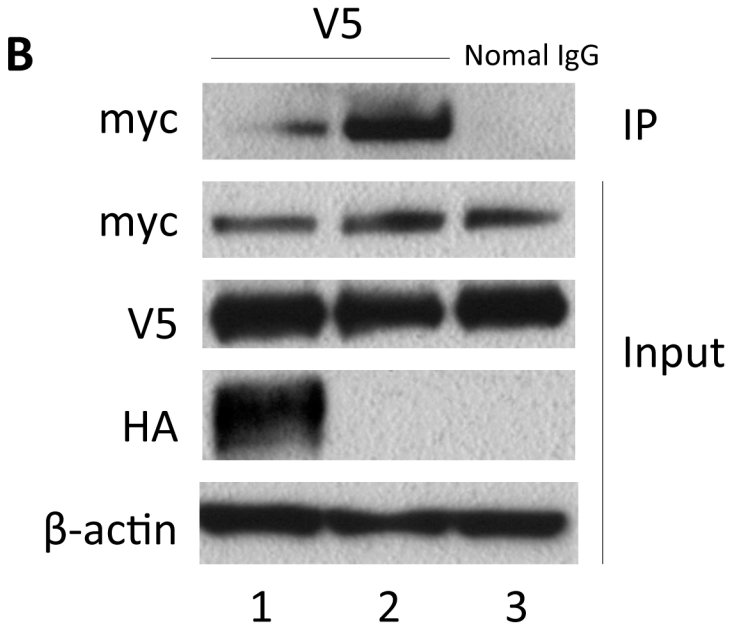
Figure S2. Detection of *trans*-dimerization of APP. (a) Schematic drawing of the detection of APP *trans*-dimerization. APP-V5 and APP-myc were separately transfected into HEK293 cells cultured in different dishes. Each dish was co-cultured 24 h after transfection, followed by harvesting 48 h after transfection. (b) Comparison between APP *cis*- and *trans*-dimerization. APP *trans*-dimerization was immunoprecipitated by anti-V5 tag antibody, followed by the blotting with anti-myc tag antibody. The amount of APP *trans*-dimer was smaller (lane1) compared to the dimer observed after co-transfection of APP-V5 and APP-myc (lane2).

Figure S3. The effect of N-cadherin expression on the levels of APPluc1 and APPluc2. HEK293 cells were transfected with APP luc1 and APPluc2 in the presence or absence of NcadHA. The expression levels were analyzed by western blot, using anti-APP and anti-luciferase antibody.



Supplementary Figure 1



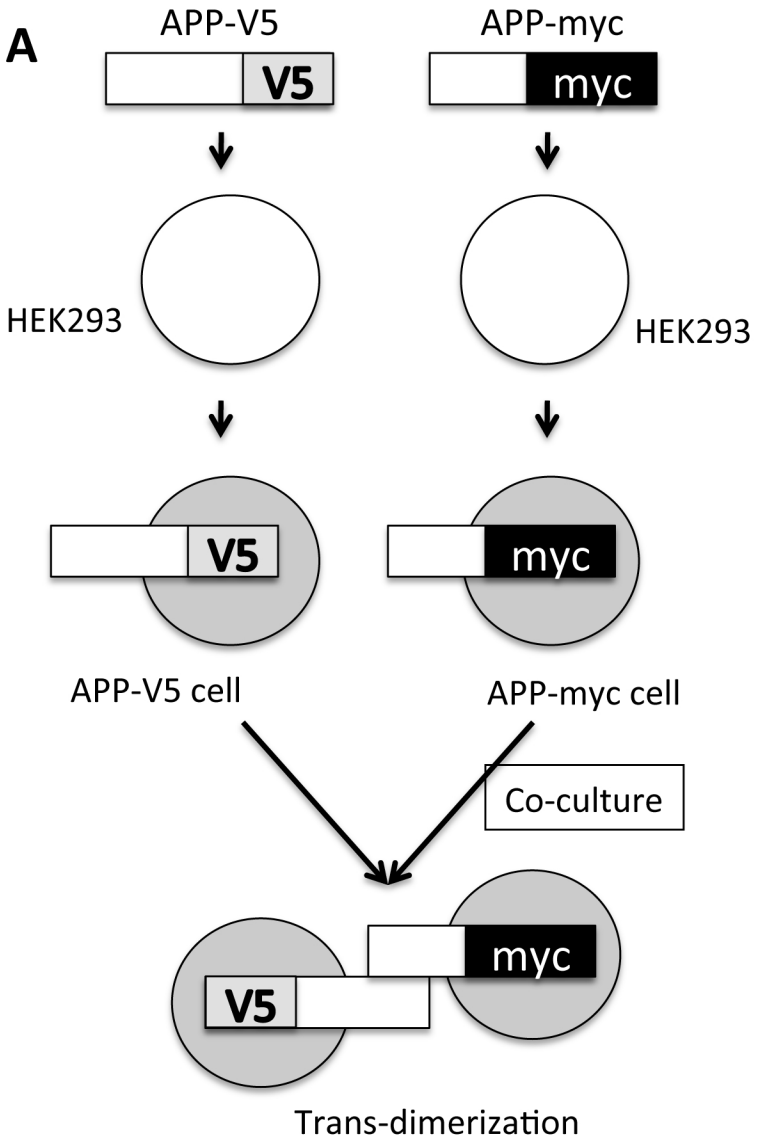


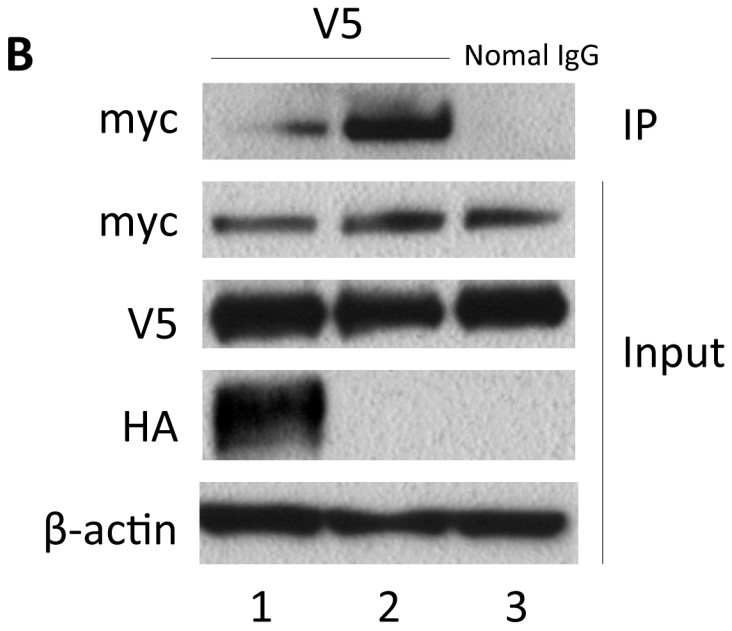
1: (APP-V5+N-cad) cells + (APP-myc+N-cad) cells

2: (APP-V5+APP-myc) cells

3: (APP-V5+APP-myc) cells

Supplementary Figure 2





1: (APP-V5+N-cad) cells + (APP-myc+N-cad) cells

2: (APP-V5+APP-myc) cells

3: (APP-V5+APP-myc) cells

Supplementary Figure 2