

Supporting Figure S1 Selected examples of alterations in gene expression induced by A $\beta$ . A $\beta$ -(1–42) (5  $\mu$ M) was incubated with the cells for 24 h (c-FLIP (Probe Set ID: 210564\_x\_at) and caspase-3 (Probe Set ID: 202763\_at)) or 6 h (JMJD6 (Probe Set ID: 212723\_at)). Differences from the control without A $\beta$  were evaluated by the two-tailed Student's *t*-test.



Supporting Figure S2 KEGG pathway map related to apoptosis. Blue color indicates significant decrease of gene expression compared with the control (p < 0.01). Caspase-3 is highlighted by the red circle.



Supporting Figure S3 Fibril formation under treatment with inflammation inhibitors. A $\beta$  fibrils were detected with Congo red (n = 5, representative images are presented). Upper: A $\beta$  only (5  $\mu$ M, 24h); Middle: A $\beta$  plus neutralizing antibodies for TLR4 and TLR6 (5  $\mu$ g mL<sup>-1</sup> each); Lower: A $\beta$  plus MCC950 (10  $\mu$ M).



Supporting Figure S4 Correlation between fibril formation of A $\beta$ -(1–40) and apoptosis. Time-dependent increases in Congo red staining (A) and active caspase-3 (B) upon treatment with A $\beta$ -(1–40). SH-SY5Y cells were treated with 50  $\mu$ M monomeric A $\beta$ -(1–40) for the indicated periods. The fluorescence intensity of cells was quantified from fluorescence images obtained with a confocal microscope (mean ± S. E. (n = 100)). Differences from the negative control (n.c.) were evaluated by the two-tailed Student's *t*-test. No significant increase in caspase activity was observed after 24-h incubation, whereas significant caspase activities were observed after 48- and 72-h incubations concomitant with amyloid deposition.