## SANTA CRUZ BIOTECHNOLOGY, INC.

# β-Amyloid (672-714): sc-4504 WB



### BACKGROUND

Proteolytic cleavage of the amyloid protein precursor (APP) gives rise to the  $\beta$ -Amyloid and Amyloid A4 proteins, which are present in human platelets. Amyloid deposition is associated with type II diabetes, Down syndrome and a variety of neurological disorders, including Alzheimer's disease. The amyloid precursor protein (APP) undergoes alternative splicing, resulting in several isoforms. Proteolytic cleavage of APP leads to the formation of the 4 kDa amyloid  $\beta$ /A4 protein. This protein is involved in the formation of neurofibrillary tangles and plaques that characterize the senile plaques of Alzheimer patients. APLP1 (amyloid precursor-like protein 1) and APLP2 are structurally similar to APP. Human APLP2 is a membrane-bound sperm protein that contains a region highly homologous to the transmembrane-cytoplasmic domains of APP found in brain plaques of Alzheimer disease patients.

## REFERENCES

- 1. Kosik, K.S. 1992 Alzheimer's disease: a cell perspective. Science 256: 780-783.
- 2. Dyrks, T.,Dyrks E., Monning U., Urmoneit, B., Turner, J., and Beyreuther, K. 1993. Generation of  $\beta$ /A4 from the amyloid protein precursor and fragments thereof. FEBS Lett. 335: 89-93.
- 3. Hirai, S. and Okamoto, K. 1993. Amyloid  $\beta$ /A4 peptide associated with Alzheimer's disease and cerebral amyloid angiopathy. Internal Med. 32: 923-925.
- Arendt, T., Holzer, M., Fruth, R., Bruckner, M.K., and Gartner, U. 1995. Paired helical filament-like phosphorylation of tau, deposition of β/A4amyloid and memory impairment in rat induced by chronic inhibition of phosphatase 1 and 2A. Neuroscience 69: 691-698.
- Gillmore, J.D., Hawkins, P.N., and Pepys, M.B. 1997. Amyloidosis: a review of recent diagnostic and therapeutic developments. Br. J. Haematol. 99: 245-256.
- van Leeuwen, F.W., de Kleijn, D.P., van den Hurk, H.H., Neubauer, A., Sonnemans, M.A., Sluijs, J.A., Koycu, S., Ramdjielal, R.D.J., Salehi, A., Martens, G.J.M., *et al.* 1998. Frameshift mutants of β amyloid precursor protein and ubiquitin-B in Alzheimer's and Down patients. Science 279: 242-247.
- 7. Tamboli, I.Y., Prager, K., Barth, E., Heneka, M., Sandhoff, K., and Walter, J. 2005. Inhibition of glycosphingolipid biosynthesis reduces secretion of the  $\beta$ -amyloid precursor protein and amyloid beta-peptide. J. Biol. Chem. 280: 28110-28117.

## SOURCE

 $\beta$ -Amyloid (672-714) is expressed in E. coli as a 32 kDa tagged fusion protein corresponding to amino acids 672-714 of  $\beta$ -Amyloid of human origin.

#### PRODUCT

 $\beta$ -Amyloid (672-714) is purified from bacterial lysates (>98%) by glutathione agarose affinity chromatography; supplied as 10  $\mu g$  in 0.1 ml SDS-PAGE loading buffer.

## APPLICATIONS

 $\beta$ -Amyloid (672-714) is suitable as a Western blotting control for sc-5399, sc-5400 and sc-9129.

### **STORAGE**

Store at -20° C; stable for one year from the date of shipment.

#### **RESEARCH USE**

For research use only, not for use in diagnostic procedures.