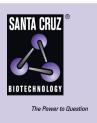
SANTA CRUZ BIOTECHNOLOGY, INC.

β-Amyloid (6C3): sc-517461



BACKGROUND

Proteolytic cleavage of the Amyloid protein precursor (APP) gives rise to the β -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 β /A4 Amyloid protein. This protein is involved in the formation of neurofibrillary tangles and plaques that characterize the senile plaques of Alzheimer's 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's disease patients.

REFERENCES

- 1. Kosik, K.S. 1992. Alzheimer's disease: a cell perspective. Science 256: 780-783.
- Dyrks, T., Dyrks, E., Monning, U., Urmoneit, B., Turner, J. and Beyreuther, K. 1993. Generation of β/A4 from the Amyloid protein precursor and fragments thereof. FEBS Lett. 335: 89-93.
- 3. Hirai, S. and Okamoto, K. 1993. Amyloid β /A4 peptide associated with Alzheimer's disease and cerebral Amyloid angiopathy. Intern. 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/A4-Amyloid 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.
- 6. 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., Salehi, A., Martens, G.J., Grosveld, F.G., Peter, J., Burbach, H. and Hol, E.M. 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 β -Amyloid precursor protein and Amyloid β -peptide. J. Biol. Chem. 280: 28110-28117.
- 8. LocusLink Report (LocusID: 351). http://www.ncbi.nlm.nih.gov/LocusLink/

CHROMOSOMAL LOCATION

Genetic locus: APP (human) mapping to 21q21.3.

SOURCE

 β -Amyloid (6C3) is a mouse monoclonal antibody raised against recombinant oligomeric β -Amyloid of human origin.

PRODUCT

Each vial contains 200 $\mu g~lg G_{2b}$ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

 β -Amyloid (6C3) is recommended for detection of β -Amyloid of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

Molecular Weight of β-Amyloid: 4-46 kDa.

Molecular Weight of Amyloid A4: 100-125 kDa.

SELECT PRODUCT CITATIONS

 Bi, Y., Li, C., Zhang, Y., Wang, Y., Chen, S., Yue, Q., Hoover, R.S., Wang, X.H., Delpire, E., Eaton, D.C., Zhuang, J. and Cai, H. 2020. Stimulatory role of SPAK signaling in the regulation of large conductance Ca²⁺-activated potassium (BK) channel protein expression in kidney. Front. Physiol. 11: 638.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.