

Amyloid A4 (N-18): sc-7498

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's 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 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 β A4 from the amyloid protein precursor and fragments thereof. *FEBS Letts.* 335: 89-93.
3. Hirai, S. and Okamoto, K. 1993. Amyloid β /A4 peptide associated with Alzheimer's disease and cerebral amyloid angiopathy. *Int. Med.* 32: 923-925.
4. 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.
5. Gillmore, J.D., Hawkins, P.N., and Pepys, M.B. 1997. Amyloidosis: a review of recent diagnostic and therapeutic developments. *British J. of Haematol.* 99: 245-256.

SOURCE

Amyloid A4 (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Amyloid A4 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-7498 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

PROTOCOLS

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

APPLICATIONS

Amyloid A4 (N-18) is recommended for detection of amyloid A4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for APP siRNA (h): sc-29677, APP siRNA (m): sc-29678, APP shRNA Plasmid (h): sc-29677-SH, APP shRNA Plasmid (m): sc-29678-SH, APP shRNA (h) Lentiviral Particles: sc-29677-V and APP shRNA (m) Lentiviral Particles: sc-29678-V.

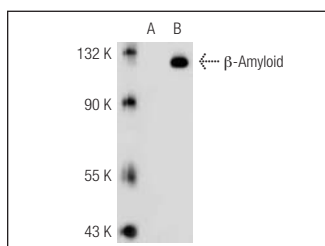
Molecular Weight of Amyloid A4: 100-125 kDa.

Positive Controls: H4 cell lysate: sc-2408, mouse brain extract: sc-2253 or rat brain extract: sc-2392.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Amyloid A4 (N-18): sc-7498. Western blot analysis of β -Amyloid expression in non-transfected: sc-117752 (A) and human β -Amyloid transfected: sc-117075 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Bao, J., et al. 2007. Suppression of beta-amyloid precursor protein signaling into the nucleus by estrogens mediated through complex formation between the estrogen receptor and Fe65. *Mol. Cell. Biol.* 27: 1321-1333.

RESEARCH USE

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