

Amyloid A4 (C-20): sc-7496

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 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.
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 Lett.* 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. 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.

CHROMOSOMAL LOCATION

Genetic locus: APP (human) mapping to 21q21.3; App (mouse) mapping to 16 C3.3.

SOURCE

Amyloid A4 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-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-7496 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Amyloid A4 (C-20) 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), 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).

Amyloid A4 (C-20) is also recommended for detection of Amyloid A4 in additional species, including equine, canine, bovine, porcine and avian.

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) 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.

SELECT PRODUCT CITATIONS

1. Nizzari, M., Venezia, V., Repetto, E., Caorsi, V., Magrassi, R., Gagliani, M.C., Carlo, P., Florio, T., Schettini, G., Tacchetti, C., Russo, T., Diaspro, A. and Russo, C. 2007. Amyloid precursor protein and Presenilin1 interact with the adaptor GRB2 and modulate ERK 1,2 signaling. *J. Biol. Chem.* 282: 13833-13844.

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.



Try **β -Amyloid (B-4): sc-28365** or **β -Amyloid (D-11): sc-374527**, our highly recommended monoclonal alternatives to Amyloid A4 (C-20). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **β -Amyloid (B-4): sc-28365**.