

β-Amyloid (H-43): sc-9129

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. APL1 (amyloid precursor-like protein 1) and APL2 are structurally similar to APP. Human APL2 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.

CHROMOSOMAL LOCATION

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

SOURCE

β-Amyloid (H-43) is a rabbit polyclonal antibody raised against amino acids 672-714 of Amyloid A4 representing full length β-Amyloid protein of human origin.

PRODUCT

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

APPLICATIONS

β-Amyloid (H-43) is recommended for detection of 4 kDa β-Amyloid and Amyloid A4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μg per 100-500 μg 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).

β-Amyloid (H-43) is also recommended for detection of 4 kDa β-Amyloid and 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 β-Amyloid: 4-46 kDa.

Molecular Weight of Amyloid A4: 100-125 kDa.

Positive Controls: H4 cell lysate: sc-2408, PC-3 cell lysate: sc-2220 or U-87 MG cell lysate: sc-2411.

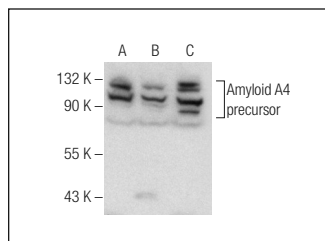
RESEARCH USE

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

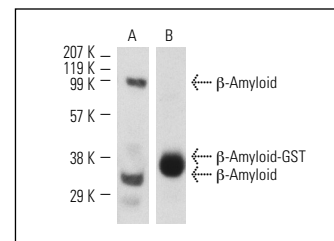
STORAGE

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

DATA



β-Amyloid (H-43): sc-9129. Western blot analysis of β-Amyloid expression in H4 (A), PC-3 (B) and U-87 MG (C) whole cell lysates.



β-Amyloid (H-43): sc-9129. Western blot analysis of β-Amyloid expression in H4 whole cell lysate (A) and human recombinant β-Amyloid fusion protein (B).

SELECT PRODUCT CITATIONS

1. Wolvetang, E.W., et al. 2003. The chromosome 21 transcription factor Ets-2 transactivates the β-APP promoter: implications for Down syndrome. *Biochem. Biophys. Acta* 1628: 105-110.
2. Holginger, G.U., et al. 2005. The mitochondrial complex I inhibitor rotenone triggers a cerebral tauopathy. *J. Neurochem.* 95: 930-939.
3. Tang, K., et al. 2006. Platelet amyloid precursor protein processing: a bio-marker for Alzheimer's disease. *J. Neurol. Sci.* 240: 53-58.
4. Escobar-Khondiker, M., et al. 2007. Annonacin, a natural mitochondrial complex I inhibitor, causes Tau pathology in cultured neurons. *J. Neurosci.* 27: 7827-7837.
5. Garcia, N., et al. 2008. Short-term effects of β-amyloid 25-35 peptide aggregates on transmitter release in neuromuscular synapses. *J. Neuropathol. Exp. Neurol.* 67: 250-259.

PROTOCOLS

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



Try **β-Amyloid (B-4): sc-28365** or **β-Amyloid (D-11): sc-374527**, our highly recommended monoclonal alternatives to β-Amyloid (H-43). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **β-Amyloid (B-4): sc-28365**.