

β-Amyloid (B-4): sc-28365

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 β-Amyloid/A4 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

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- Arendt, T., Holzer, M., Fruth, R., Bruckner, M.K., and Gartner, U. 1995. Paired helical filament-like phosphorylation of τ, deposition of β/A4-Amyloid and memory impairment in rat induced by chronic inhibition of phosphatase 1 and 2A. *Neuroscience* 69: 691-698.
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CHROMOSOMAL LOCATION

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

SOURCE

β-Amyloid (B-4) is a mouse monoclonal antibody raised against amino acids 672-714 of Amyloid A4 representing full length β-Amyloid of human origin.

PRODUCT

Each vial contains 200 μg IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

β-Amyloid (B-4) is recommended for detection of β-Amyloid and Amyloid A4 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μg per 100-500 μg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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 (various forms).

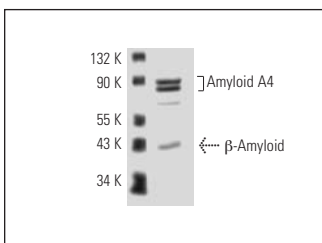
Molecular Weight of Amyloid A4: 100-125 kDa (various forms).

Positive Controls: H4 cell lysate: sc-2408, β-Amyloid (h): 293T Lysate: sc-117075 or rat brain extract: sc-2392.

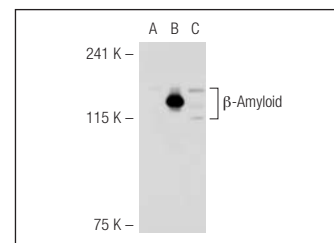
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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 goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2050 or ABC: sc-2017 mouse IgG Staining Systems.

DATA



β-Amyloid (B-4): sc-28365. Western blot analysis of Amyloid A4 and β-Amyloid expression in rat brain tissue extract.



β-Amyloid (B-4): sc-28365. Western blot analysis of β-Amyloid expression in non-transfected 293T: sc-117752 (A), human β-Amyloid transfected 293T: sc-117075 (B) and H4 (C) whole cell lysates.

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.