

β-Amyloid (LN27): sc-65642

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 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. Dyrs, T., et al. 1993. Generation of β A4 from the amyloid protein precursor and fragments thereof. *FEBS Lett.* 335: 89-93.

CHROMOSOMAL LOCATION

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

SOURCE

β-Amyloid (LN27) is a mouse monoclonal antibody raised against recombinant β-Amyloid₆₉₅ of human origin.

PRODUCT

Each vial contains 200 μg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

β-Amyloid (LN27) is recommended for detection of APP and an epitope within the first 200 amino acids in β-Amyloid 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 immunohistochemistry (including paraffin-embedded sections) (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.

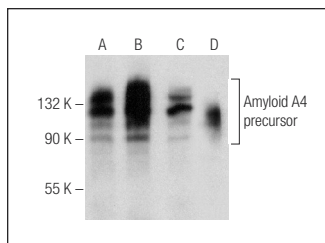
Molecular Weight of Amyloid A4: 100-125 kDa.

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

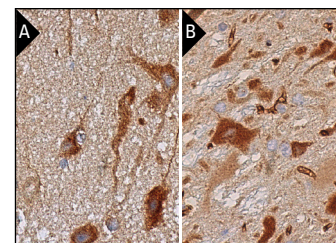
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



β-Amyloid (LN27): sc-65642. Western blot analysis of β-Amyloid expression in H4 (A), PC-3 (B) and U-87 MG (C) whole cell lysates and human brain tissue extract (D).



β-Amyloid (LN27): sc-65642. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebral cortex tissue showing cytoplasmic staining of neuronal cells and neuropil staining (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse brain tissue showing cytoplasmic staining of neuronal cells and cytoplasmic and membrane staining of endothelial cells (B).

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.



See **β-Amyloid (B-4): sc-28365** for β-Amyloid antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.