

# β-Amyloid (2C8): sc-58495

## 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

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3. Hirai, S. and Okamoto, K. 1993. Amyloid β/A4 peptide associated with Alzheimer's disease and cerebral Amyloid angiopathy. *Intern. 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. *Neurosci.* 69: 691-698.
5. Gillmore, J.D., Hawkins, P.N. and Pepys, M.B. 1997. Amyloidosis: a review of recent diagnostic and therapeutic developments. *Br. J. Haematol.* 99: 245-256.
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## CHROMOSOMAL LOCATION

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

## SOURCE

β-Amyloid (2C8) is a mouse monoclonal antibody raised against amino acids 1-16 of β-Amyloid human origin.

This product has been manufactured by MBL International Corporation.

## PRODUCT

Each vial contains 100 μg IgG<sub>2b</sub> in 1.0 ml of PBS with < 0.1% sodium azide, 0.1% gelatin and 5% glycerol.

## APPLICATIONS

β-Amyloid (2C8) is recommended for detection of β-Amyloid isoforms of human and, to a lesser extent, mouse 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); may cross-react with amyloid precursor protein (APP).

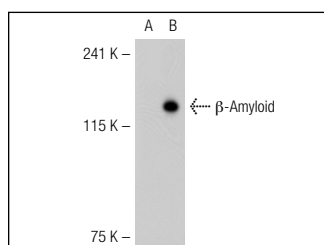
Molecular Weight of β-Amyloid: 4-46 kDa.

Positive Controls: H4 cell lysate: sc-2408.

## 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 (2C8): sc-58495. 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.

## 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.