

BBP (T-13): sc-161380

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. 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. BBP (β -Amyloid-binding protein), also known as TM2D1 (TM2 domain-containing protein 1), is a 207 amino acid multi-pass membrane protein containing a G protein-coupling module that allows for interaction with the β -Amyloid peptide of APP. In cell culture, expression of BBP induces caspase-dependent vulnerability to β -Amyloid peptide toxicity, suggesting that it is a target of β -Amyloid and may be involved in the molecular pathophysiology of Alzheimer's disease.

REFERENCES

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3. Lee, Y., et al. 2003. β -Amyloid peptide binding protein does not couple to G protein in a heterologous *Xenopus* expression system. *J. Neurosci. Res.* 73: 255-259.
4. Kawasumi, M., et al. 2004. Cytoplasmic tail adaptors of Alzheimer's Amyloid- β protein precursor. *Mol. Neurobiol.* 30: 185-200.
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6. Cohen, L.S., et al. 2008. Expression and biophysical analysis of two double-transmembrane domain-containing fragments from a yeast G protein-coupled receptor. *Biopolymers* 90: 117-130.
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CHROMOSOMAL LOCATION

Genetic locus: TM2D1 (human) mapping to 1p31.3; Tm2d1 (mouse) mapping to 4 C6.

SOURCE

BBP (T-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of BBP 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-161380 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

BBP (T-13) is recommended for detection of BBP of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

BBP (T-13) is also recommended for detection of BBP in additional species, including equine and canine.

Suitable for use as control antibody for BBP siRNA (h): sc-78572, BBP siRNA (m): sc-141482, BBP shRNA Plasmid (h): sc-78572-SH, BBP shRNA Plasmid (m): sc-141482-SH, BBP shRNA (h) Lentiviral Particles: sc-78572-V and BBP shRNA (m) Lentiviral Particles: sc-141482-V.

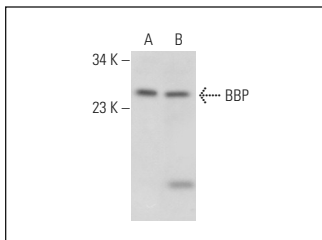
Molecular Weight of BBP: 19 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209 or mouse testis extract: sc-2405.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



BBP (T-13): sc-161380. Western blot analysis of BBP expression in HL-60 whole cell lysate (A) and mouse testis tissue extract (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.