

BLP1 (L-16): sc-86982

BACKGROUND

Alzheimer's disease is histologically characterized by the presence of β -Amyloid plaques that accumulate in brain tissue. It is thought that these plaques interfere with calcium ion homeostasis, resulting in neuron cell death. BLP1 (β -amyloid-binding protein-like protein 1), also known as TM2 domain-containing protein 2, is a 214 amino acid multi-pass transmembrane protein that is expressed ubiquitously, with highest expression in hippocampus. BLP1 shares significant structural and sequence similarity with BBP (β -Amyloid peptide binding protein), which regulates responses to β -Amyloid. *In vitro*, BBP binds β -Amyloid with high affinity and selectivity, suggesting that BBP is a molecular target of β -Amyloid. Related to the G protein-coupled receptor superfamily, BBP can modulate neuronal apoptosis initiated by β -Amyloid through a G protein and caspase dependent mechanism. BLP1, which exists as two alternatively spliced isoforms, is thought to function in a similar manner to BLP1.

REFERENCES

- Hansis, C., Jähner, D., Spiess, A.N., Boettcher, K. and Ivell, R. 1998. The gene for the Alzheimer-associated β -amyloid-binding protein (ERAB) is differentially expressed in the testicular Leydig cells of the azoospermic by w/w(v) mouse. *Eur. J. Biochem.* 258: 53-60.
- Kajkowski, E.M., Lo, C.F., Ning, X., Walker, S., Sofia, H.J., Wang, W., Edris, W., Chanda, P., Wagner, E., Vile, S., Ryan, K., McHendry-Rinde, B., Smith, S.C., Wood, A., Rhodes, K.J., Kennedy, J.D., Bard, J., Jacobsen, J.S. and Ozenberger, B.A. 2001. β -Amyloid peptide-induced apoptosis regulated by a novel protein containing a g protein activation module. *J. Biol. Chem.* 276: 18748-18756.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 610080. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Sadowski, M., Pankiewicz, J., Scholtzova, H., Ripellino, J.A., Li, Y., Schmidt, S.D., Mathews, P.M., Fryer, J.D., Holtzman, D.M., Sigurdsson, E.M. and Wisniewski, T. 2004. A synthetic peptide blocking the apolipoprotein E/ β -Amyloid binding mitigates β -Amyloid toxicity and fibril formation *in vitro* and reduces β -Amyloid plaques in transgenic mice. *Am. J. Pathol.* 165: 937-948.
- Hook, V., Schechter, I., Demuth, H.U. and Hook, G. 2008. Alternative pathways for production of β -Amyloid peptides of Alzheimer's disease. *Biol. Chem.* 389: 993-1006.
- Gomperts, S.N., Rentz, D.M., Moran, E., Becker, J.A., Locascio, J.J., Klunk, W.E., Mathis, C.A., Elmaleh, D.R., Shoup, T., Fischman, A.J., Hyman, B.T., Growdon, J.H. and Johnson, K.A. 2008. Imaging amyloid deposition in Lewy body diseases. *Neurology* 71: 903-910.

CHROMOSOMAL LOCATION

Genetic locus: TM2D2 (human) mapping to 8p11.22; Tm2d2 (mouse) mapping to 8 A2.

RESEARCH USE

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

SOURCE

BLP1 (L-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of BLP1 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-86982 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

BLP1 (L-16) is recommended for detection of BLP1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

BLP1 (L-16) is also recommended for detection of BLP1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for BLP1 siRNA (h): sc-77828, BLP1 siRNA (m): sc-141714, BLP1 shRNA Plasmid (h): sc-77828-SH, BLP1 shRNA Plasmid (m): sc-141714-SH, BLP1 shRNA (h) Lentiviral Particles: sc-77828-V and BLP1 shRNA (m) Lentiviral Particles: sc-141714-V.

Molecular Weight of BLP1: 23 kDa.

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) 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.

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.