

BACE2 (H-90): sc-15388

BACKGROUND

Autosomal dominant Alzheimer's disease is caused by mutations in the gene encoding the β -amyloid protein precursor (APP). Amyloid β -peptide (A β), the major feature of amyloid plaques in Alzheimer's patients, is the product of APP cleavage by β - and γ -secretases. BACE is the transmembrane protease which cleaves A β from APP. BACE and the related protein Asp1 are both widely expressed in human tissue with the highest levels in the pancreas. BACE is localized within Golgi and endosomes.

REFERENCES

1. Kang, J., et al. 1987. The precursor of Alzheimer's disease amyloid A4 protein resembles a cell-surface receptor. *Nature* 325: 733-736.
2. Goate, A., et al. 1991. Segregation of a missense mutation in the amyloid precursor protein gene with familial Alzheimer's disease. *Nature* 349: 704-706.
3. Mullan, M., et al. 1992. A pathogenic mutation for probable Alzheimer's disease in the APP gene at the N-terminus of β -amyloid. *Nat. Genet.* 1: 345-347.
4. Selkoe, D.J. 1998. The cell biology of β -amyloid precursor protein and presenilin in Alzheimer's disease. *Trends. Cell Biol.* 8: 447-453.
5. Yan, R., et al. 1999. Membrane-anchored aspartyl protease with Alzheimer's disease β -secretase activity. *Nature* 402: 533-537.
6. Vassar, R., et al. 1999. β -secretase cleavage of Alzheimer's amyloid precursor protein by the transmembrane aspartic protease BACE. *Science* 286: 735-741.
7. Hussain, I., et al. 1999 Identification of a novel aspartic protease (Asp 2) as β -secretase. *Mol. Cell. Neurosci.* 14: 419-427.
8. Schmechel, A., et al. 2004. Human BACE forms dimers and colocalizes with APP. *J. Biol. Chem.* 279: 39710-39717.
9. Patel, S., et al. 2004. Apo and inhibitor complex structures of BACE (β -secretase). *J. Mol. Biol.* 343: 407-416.

CHROMOSOMAL LOCATIONS

Genetic locus: BACE2 (human) mapping to 21q22.2; Bace2 (mouse) mapping to 16 C4.

SOURCE

BACE2 (H-90) is a rabbit polyclonal antibody raised against amino acids 429-518 mapping near the C-terminus of BACE2 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.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

BACE2 (H-90) is recommended for detection of BACE2 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).

BACE2 (H-90) is also recommended for detection of BACE2 in additional species, including canine and bovine.

Suitable for use as control antibody for BACE2 siRNA (h): sc-29776, BACE2 siRNA (m): sc-29777, BACE2 shRNA Plasmid (h): sc-29776-SH, BACE2 shRNA Plasmid (m): sc-29777-SH, BACE2 shRNA (h) Lentiviral Particles: sc-29776-V and BACE2 shRNA (m) Lentiviral Particles: sc-29777-V.

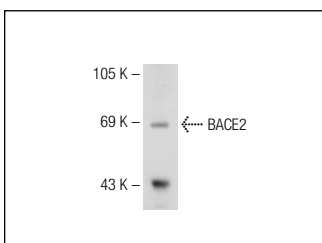
Molecular Weight of BACE2 isoforms: 70/56/50/48/46/43 kDa.

Positive Controls: H4 cell lysate: sc-2408, HeLa whole cell lysate: sc-2200 or mouse pancreas extract: sc-364244.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



BACE2 (H-90): sc-15388. Western blot analysis of BACE2 expression in HeLa whole cell lysate.

RESEARCH USE

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

MONOS
Satisfaction
Guaranteed

Try **BACE2 (H-3): sc-271212** or **BACE2 (F-12): sc-271286**, our highly recommended monoclonal alternatives to BACE2 (H-90).