

BACE (61-3E7): sc-33711

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.

CHROMOSOMAL LOCATION

Genetic locus: BACE1 (human) mapping to 11q23.3; Bace1 (mouse) mapping to 9 A5.2.

SOURCE

BACE (61-3E7) is a mouse monoclonal antibody raised against a C-terminal synthetic BACE peptide of human origin.

PRODUCT

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

BACE (61-3E7) is available conjugated to agarose (sc-33711 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-33711 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-33711 PE), fluorescein (sc-33711 FITC), Alexa Fluor® 488 (sc-33711 AF488), Alexa Fluor® 546 (sc-33711 AF546), Alexa Fluor® 594 (sc-33711 AF594) or Alexa Fluor® 647 (sc-33711 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-33711 AF680) or Alexa Fluor® 790 (sc-33711 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

BACE (61-3E7) is recommended for detection of BACE of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500); non cross-reactive with BACE2.

Suitable for use as control antibody for BACE siRNA (h): sc-37224, BACE siRNA (m): sc-37225, BACE shRNA Plasmid (h): sc-37224-SH, BACE shRNA Plasmid (m): sc-37225-SH, BACE shRNA (h) Lentiviral Particles: sc-37224-V and BACE shRNA (m) Lentiviral Particles: sc-37225-V.

Molecular Weight of BACE: 70 kDa.

Positive Controls: BACE (h2): 293 Lysate: sc-170789, MIA PaCa-2 cell lysate: sc-2285 or SH-SY5Y cell lysate: sc-3812.

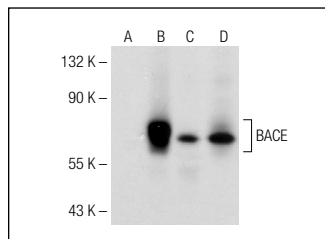
STORAGE

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

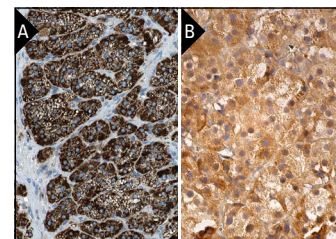
RESEARCH USE

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

DATA



BACE (61-3E7): sc-33711. Western blot analysis of BACE expression in non-transfected 293: sc-110760 (A), human BACE transfected 293: sc-170789 (B), MIA PaCa-2 (C) and SH-SY5Y (D) whole cell lysates.



BACE (61-3E7): sc-33711. Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic staining of cortical cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Xiong, H., et al. 2008. Cholesterol retention in Alzheimer's brain is responsible for high β - and γ -secretase activities and A β production. *Neurobiol. Dis.* 29: 422-437.
- Zhao, Y., et al. 2011. Docosahexaenoic acid-derived neuroprotectin D1 induces neuronal survival via secretase- and PPAR γ -mediated mechanisms in Alzheimer's disease models. *PLoS ONE* 6: e15816.
- Sutinen, E.M., et al. 2012. Pro-inflammatory interleukin-18 increases Alzheimer's disease-associated amyloid- β production in human neuron-like cells. *J. Neuroinflammation* 9: 199.
- Natunen, T., et al. 2013. Elucidation of the BACE1 regulating factor GGA3 in Alzheimer's disease. *J. Alzheimers Dis.* 37: 217-232.
- Jeong, Y.J., et al. 2015. 1950 MHz electromagnetic fields ameliorate A β pathology in Alzheimer's disease mice. *Curr. Alzheimer Res.* 12: 481-492.
- Natunen, T., et al. 2016. Relationship between ubiquitin-1 and BACE1 in human Alzheimer's disease and APdE9 transgenic mouse brain and cell-based models. *Neurobiol. Dis.* 85: 187-205.
- Khan, M., et al. 2019. 17 β -estradiol modulates SIRT1 and halts oxidative stress-mediated cognitive impairment in a male aging mouse model. *Cells* 8 pii: E928.
- Ali, W., et al. 2020. Oral administration of α linoleic acid rescues A β -induced Glia-mediated neuroinflammation and cognitive dysfunction in C57BL/6N mice. *Cells* 9 pii: E667.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.