SANTA CRUZ BIOTECHNOLOGY, INC.

# BACE (h): 293T Lysate: sc-159912

## BACKGROUND

Autosomal dominant Alzheimer's disease is caused by mutations in the gene encoding the β-Amyloid protein precursor (APP). Amyloid β-peptide (Aβ), 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 Aβ 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. Beta-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 Molec. 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 LOCATION

Genetic locus: BACE1 (human) mapping to 11q23.3.

## PRODUCT

BACE (h): 293T Lysate represents a lysate of human BACE transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

## APPLICATIONS

BACE (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive BACE antibodies. Recommended use: 10-20 µl per lane.

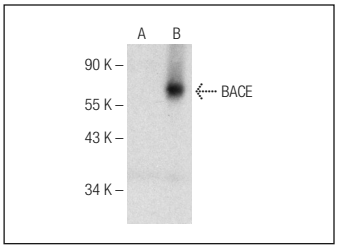
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

BACE (A-12): sc-365948 is recommended as a positive control antibody for Western Blot analysis of enhanced human BACE expression in BACE transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

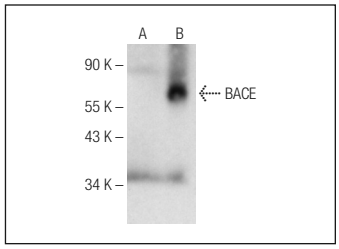
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

## DATA




BACE (A-12): sc-365948. Western blot analysis of BACE expression in non-transfected: sc-117752 (**A**) and human BACE transfected: sc-159912 (**B**) 293T whole cell lysates.




BACE (H-10): sc-365947. Western blot analysis of BACE expression in non-transfected: sc-117752 (**A**) and human BACE transfected: sc-159912 (**B**) 293T whole cell lysates.

## STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## RESEARCH USE

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

## PROTOCOLS

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