

BACE2 Antibody

BACE2 (NT): Beta-site APP cleaving enzyme 2, Asp1, DRAP

CATALOG NO.: 2247

BACKGROUND:

Accumulation of the amyloid- β ($A\beta$) plaque in the cerebral cortex is a critical event in the pathogenesis of Alzheimer's disease. $A\beta$ peptide is generated by proteolytic cleavage of the β -amyloid protein precursor (APP) at β - and γ -sites by proteases. The long-sought β -secretase was recently identified by several groups independently and designated beta-site APP cleaving enzyme (BACE) and aspartyl protease 2 (Asp2) (1-4). A BACE homolog was recently cloned and designated BACE2, Asp1, DRAP (for Down region aspartic protease), and memapsin 1 (4-9). BACE2 also cleaves APP at β -site and at a different site within $A\beta$ (8). BACE2 locates on chromosome 21q22.3, the so-called 'Down critical region', suggesting that BACE2 and $A\beta$ may also contribute to the pathogenesis of Down syndrome (6,7)

SOURCE:

Rabbit polyclonal BACE2 antibody was raised against a synthetic peptide corresponding to amino acids near the amino terminus of human BACE2 (4).

APPLICATION:

BACE2 antibody can be used for detection of BACE2 by Western blot at 0.5 to 1 μ g/ml. (Optimal dilution should be determined by user.) Human heart tissue lysate can be used as positive control. BACE2 antibody is human, mouse, and rat reactive. **For research use only.**

STORAGE:

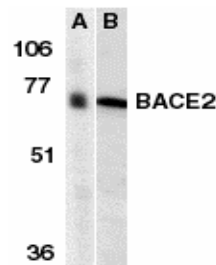
BACE2 antibody is supplied as immunoaffinity chromatography purified IgG, in PBS containing 0.02% sodium azide. Store at 4°C, stable for one year. Azide free antibody is available.

RELATED PRODUCTS:

Blocking peptide, Catalog No. **2247P**.

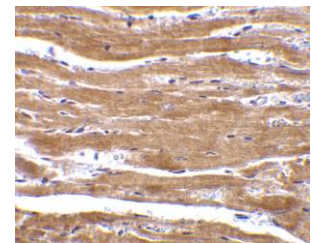
Human Heart Tissue lysate, Catalog No. **1301**.

BACE2 Antibody (CT), Catalog No. **2249**.



Western blot analysis of BACE2 in human (A) and mouse (B) heart tissue lysates with BACE2 antibody at 1 μ g/ml.

Immunohistochemistry of BACE2 in mouse heart with BACE2 antibody at 10 μ g/ml.



REFERENCES:

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3. Sinha S, et al. Purification and cloning of amyloid precursor protein beta-secretase from human brain. *Nature* 1999; 402:537-40.
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5. Lin X, et al. Human aspartic protease memapsin 2 cleaves the beta-secretase site of beta-amyloid precursor protein. *Proc. Natl. Acad. Sci. USA* 2000 15; 97:1456-60.
6. Acquati F, et al. The gene encoding DRAP (BACE2), a glycosylated transmembrane protein of the aspartic protease family, maps to the down critical region. *FEBS Lett.* 2000; 468:59-64.
7. Solans A, et al. A new aspartyl protease on 21q22.3, BACE2, is highly similar to Alzheimer's amyloid precursor protein beta-secretase. *Cytogenet Cell Genet.* 2000; 89:177-84.
8. Farzan M, et al. BACE2, a beta -secretase homolog, cleaves at the beta site and within the amyloid-beta region of the amyloid-beta precursor protein. *Proc. Natl. Acad. Sci. USA* 2000; 97:9712-7.
9. Bennett BD, et al. Expression analysis of BACE2 in brain and peripheral tissues. *J. Biol. Chem.* 2000; 275:20647-51. (06-01D)