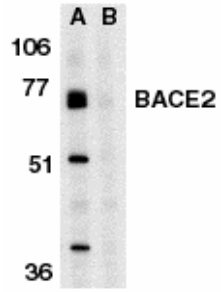
cellsciences.com

Anti-BACE2/Asp1 (CT)

CATALOG No.: PX189A SIZE: 100 µg
PX189B SIZE: 0.5 mg



Western blot analysis of BACE2 in human heart tissue lysate in the absence (A) or presence (B) of blocking peptide (2249P) with anti-BACE2 (CT) at 1 µg/ml.

BACKGROUND:

Accumulation of the amyloid-β (Aβ) plaque in the cerebral cortex is a critical event in the pathogenesis of Alzheimer's disease. Aβ 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). BACE/Asp2 is a novel transmembrane aspartic protease and co-localizes with APP. 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 Aβ (8). BACE2 locates on chromosome 21q22.3, the so-called 'Down critical region', suggesting that BACE2 and Aβ may also contribute to the pathogenesis of Down syndrome (6,7)

SOURCE:

This rabbit polyclonal antibody was raised against a peptide corresponding to amino acids 496 to 511 of human BACE2 (4).

APPLICATION:

This antibody can be used for detection of BACE2 by Western blot at 0.5 to 1 µg/ml. Human heart tissue lysate can be used as positive control. For research use only.

STORAGE:

It is supplied as immunoaffinity chromatography purified IgG, 100 µg in 200 µl of PBS containing 0.02% sodium azide. Store at 4°C, stable for one year. Azide free antibody is available.

RELATED PRODUCTS:

Blocking peptide, 50 µg at 200 µg/ml, is available for competition studies.

Human heart tissue lysate, 200 µg at 2 mg/ml, is available for positive control.

REFERENCES:

1. Vassar R, et al. Beta-secretase cleavage of Alzheimer's amyloid precursor protein by the transmembrane aspartic protease BACE. *Science* 1999;286:735-41

2. Hussain I, et al. Identification of a novel aspartic protease (Asp 2) as beta-secretase. *Mol Cell Neurosci* 1999;14:419-27

3. Sinha S, et al. Purification and cloning of amyloid precursor protein beta-secretase from human brain. *Nature* 1999;402:537-40

4. Yan R, et al. Membrane-anchored aspartyl protease with Alzheimer's disease beta-secretase activity. *Nature* 1999;402:533-7

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;89:177-184

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

CAUTION: NOT FOR USE IN HUMANS. FOR RESEARCH PURPOSES ONLY.

Cell Sciences, Inc.
480 Neponset Street
Bldg 12A
Canton, MA 02021

Toll Free: 888-769-1246
Phone: 781-828-0610
Fax: 781-828-0542

E-mail: info@cellsciences.com
Web Site: www.cellsciences.com