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Anti-BACE/Asp2 (CT)

CATALOG NO.: PX184A SIZE: 100 µg
PX184B SIZE: 0.5 mg

BACKGROUND:

Accumulation of the amyloid-b (Ab) plaque in the cerebral cortex is a critical event in the pathogenesis of Alzheimer's disease. Ab peptide is generated by proteolytic cleavage of the b-amyloid protein precursor (APP) at b- and g-sites by two proteases. APP is first cleaved by b-secretase, producing a soluble derivative of the protein and a membrane anchored 99-amino acid carboxy-terminal fragment (C99). The C99 fragment serves as substrate for g-secretase to generate the 4 kDa amyloid-b peptide, which is deposited in the brains of all suffers of Alzheimer's disease. The long-sought b-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 colocalizes with APP.

SOURCE:

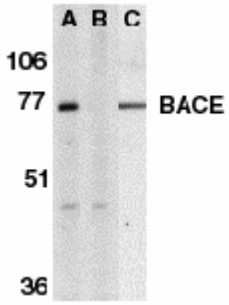
This rabbit polyclonal antibody was raised against a peptide corresponding to amino acids 485 to 501 of human BACE (1). The peptide sequence differs from those of mouse and rat BACE by one amino acid (1).

APPLICATION:

This antibody can be used for detection of BACE by Western blot at 0.5 to 1 :g/ml. Human brain tissue lysate can be used as positive control and an approximately 70 kDa band should be detected. It is human and mouse reactive. For research use only.

STORAGE:

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



Western blot analysis of BACE in human brain tissue lysate in the absence (A) or presence (B) of blocking peptide (2253P) and in mouse 3T3 cell lysate (C) with anti-BACE (CT) at 1 :g/ml.

RELATED PRODUCTS:

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

Human brain tissue lysate, 200 :g at 2 mg/ml, is available for positive control.

REFERENCES:

1. Vassar R, Bennett BD, Babu-Khan S, 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, Powell D, Howlett DR, et al. Identification of a novel aspartic protease (Asp 2) as beta-secretase. *Mol Cell Neurosci* 1999;14:419-27

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

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

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

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