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BACE1 Antibody
Rabbit Polyclonal Antibody
Catalog # ABV11207

Specification

BACE1 Antibody - Product Information

Application	**WB**
Primary Accession	P56817
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**55764**

BACE1 Antibody - Additional Information

Gene ID 23621

Positive Control	**Western blot: Recombinant protein**
Application & Usage	**Western blot: ~1:200**

Other Names
ASP2, BACE, HSPC104, KIAA1149, Beta-secretase-1, memapsin-2, aspartyl-protease-2, beta-site-APP-cleaving-enzyme-1

Target/Specificity
BACE1

Antibody Form
Liquid

Appearance
Colorless liquid

Formulation
100 µg or 30 µg (0.5 mg/ml) of antibody in PBS pH 7.2 containing 0.01 % BSA, 0.01 % thimerosal, and 50 % glycerol.

Handling
The antibody solution should be gently mixed before use.

Reconstitution & Storage
-20 °C

Background Descriptions

Precautions
BACE1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

BACE1 Antibody - Protein Information

Name BACE1 (HGNC:933)

Synonyms BACE, KIAA1149

Function
Responsible for the proteolytic processing of the amyloid precursor protein (APP). Cleaves at the N-terminus of the A-beta peptide sequence, between residues 671 and 672 of APP, leads to the generation and extracellular release of beta-cleaved soluble APP, and a corresponding cell-associated C-terminal fragment which is later released by gamma-secretase (PubMed:10656250, PubMed:10677483, PubMed:20354142). Cleaves CHL1 (By similarity).

Cellular Location
Cell membrane; Single-pass type I membrane protein Golgi apparatus, trans-Golgi network. Endoplasmic reticulum. Endosome. Cell surface. Cytoplasmic vesicle membrane; Single-pass type I membrane protein. Membrane raft {ECO:0000250|UniProtKB:P56818}. Lysosome. Late endosome. Early endosome. Recycling endosome. Cell projection, axon {ECO:0000250|UniProtKB:P56818}. Cell projection, dendrite {ECO:0000250|UniProtKB:P56818}. Note=Predominantly localized to the later Golgi/trans-Golgi network (TGN) and minimally detectable in the early Golgi compartments. A small portion is also found in the endoplasmic reticulum, endosomes and on the cell surface (PubMed:17425515, PubMed:11466313). Colocalization with APP in early endosomes is due to addition of bisecting N-acetylglucosamine wich blocks targeting to late endosomes and lysosomes (By similarity) Retrogradly transported from endosomal compartments to the trans-Golgi network in a phosphorylation- and GGA1- dependent manner (PubMed:15886016). {ECO:0000250|UniProtKB:P56818, ECO:0000269|PubMed:11466313, ECO:0000269|PubMed:15886016, ECO:0000269|PubMed:17425515}

Tissue Location
Expressed at high levels in the brain and pancreas. In the brain, expression is highest in the substantia nigra, locus coruleus and medulla oblongata.

BACE1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

BACE1 Antibody - Images

BACE1 Antibody - Background

Beta-secretase 1 (BACE1) also known as beta-site APP cleaving enzyme 1 (beta-site amyloid precursor protein cleaving enzyme 1), memapsin-2 (membrane-associated aspartic protease 2), and aspartyl protease 2 (ASP2), β-Secretase, and is a member of the peptidase A1 protein family, BACE1 is a type I integral membrane glycoprotein and aspartic protease that is found mainly in the

Golgi. BACE1 is an aspartic-acid protease important in the pathogenesis of Alzheimer's disease, and in the formation of myelin sheaths in peripheral nerve cells. The transmembrane protein contains two active site aspartate residues in its extracellular protein domain and may function as a dimer. This protease is responsible for the proteolytic processing of the amyloid precursor protein (APP). Generation of the 40 or 42 amino acid-long amyloid-β peptides that aggregate in the brain of Alzheimer's patients requires two sequential cleavages of the APP. Extracellular cleavage of APP by BACE creates a soluble extracellular fragment and a cell membrane-bound fragment referred to as C99. The elevation of BACE1 levels can be induced by amyloid plaques surrounding neurons at early stages of pathology before neuron death occurs, and may drive a positive-feedback loop in AD.