



BACE1 Antibody (N-term) Blocking Peptide

Synthetic peptide Catalog # BP7774b

Specification

BACE1 Antibody (N-term) Blocking Peptide - Product Information

Primary Accession <u>P56817</u>

BACE1 Antibody (N-term) Blocking Peptide - Additional Information

Gene ID 23621

Other Names

Beta-secretase 1, Aspartyl protease 2, ASP2, Asp 2, Beta-site amyloid precursor protein cleaving enzyme 1, Beta-site APP cleaving enzyme 1, Memapsin-2, Membrane-associated aspartic protease 2, BACE1, BACE, KIAA1149

Target/Specificity

The synthetic peptide sequence used to generate the antibody AP7774b was selected from the N-term region of human BACE1. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

BACE1 Antibody (N-term) Blocking Peptide - Protein Information

BACE1 Antibody (N-term) Blocking Peptide - Background

Cerebral deposition of amyloid beta peptide is an early and critical feature of Alzheimer's disease. Amyloid beta peptide is generated by proteolytic cleavage of amyloid precursor protein (APP) by two proteases, one of which is BACE. This protein, a member of the peptidase A1 protein family, is a type I integral membrane glycoprotein and aspartic protease that is found mainly in the Golgi.

BACE1 Antibody (N-term) Blocking Peptide - References

Xie, J., et al., J. Biol. Chem. 280(14):13824-13832 (2005).He, X., et al., J. Biol. Chem. 280(12):11696-11703 (2005).Huang, X.P., et al., J. Biol. Chem. 279(36):37886-37894 (2004).Chiocco, M.J., et al., J. Biol. Chem. 279(50):52535-52542 (2004).Yang, H.C., et al., J. Neurochem. 91(6):1249-1259 (2004).



Name BACE1 (HGNC:933)

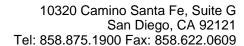
Synonyms BACE, KIAA1149

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 GGA1dependent 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 (N-term) Blocking Peptide - Protocols

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

• Blocking Peptides