

**BACE1 Antibody (N-term) Blocking Peptide**  
**Synthetic peptide**  
**Catalog # BP7774b****Specification**

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**BACE1 Antibody (N-term) Blocking Peptide - Product Information**Primary Accession [P56817](#)**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](/products/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**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](http://www.uniprot.org/citations/10656250), PubMed: [10677483](http://www.uniprot.org/citations/10677483), PubMed: [20354142](http://www.uniprot.org/citations/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 which blocks targeting to late endosomes and lysosomes (By similarity) Retrogradely 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 coeruleus 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](#)

**BACE1 Antibody (N-term) Blocking Peptide - Images****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).