10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Phospho-BACE(S498) Antibody Blocking peptide
Synthetic peptide
Catalog # BP3032a

Specification

Phospho-BACE(S498) Antibody Blocking peptide - Product Information

Primary Accession P56817

Phospho-BACE(S498) Antibody 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 AP3032a was selected from the region of human Phospho-BACE-S498. 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.

Phospho-BACE(S498) Antibody 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, 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.

Phospho-BACE(S498) Antibody Blocking peptide - Protocols

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

- Blocking Peptides

Phospho-BACE(S498) Antibody Blocking peptide - Images

Phospho-BACE(S498) Antibody 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. The encoded 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.

Phospho-BACE(S498) Antibody 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).