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BACE2 Antibody (Center) Blocking Peptide

Synthetic peptide
Catalog # BP6121a

Specification

BACE2 Antibody (Center) Blocking Peptide - Product Information

Primary Accession Q9Y5Z0

BACE2 Antibody (Center) Blocking Peptide - Additional Information

Gene ID 25825

Other Names
Beta-secretase 2, Aspartic-like protease 56 kDa, Aspartyl protease 1, ASP1, Asp 1, Beta-site amyloid precursor protein cleaving enzyme 2, Beta-site APP cleaving enzyme 2, Down region aspartic protease, DRAP, Memapsin-1, Membrane-associated aspartic protease 1, Theta-secretase, BACE2, AEPLC, ALP56, ASP21

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP6121a was selected from the Center region of human BACE2 . 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.

BACE2 Antibody (Center) Blocking Peptide - Protein Information

Name BACE2

Synonyms AEPLC, ALP56, ASP21

Function
Responsible for the proteolytic processing of the amyloid precursor protein (APP). Cleaves APP, between residues 690 and 691, leading 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. It has also been shown that it can cleave APP between residues 671 and 672 (PubMed:10591213, PubMed:11083922, PubMed:11423558,

PubMed:15857888, PubMed:16816112). Involved in the proteolytic shedding of PMEL at early stages of melanosome biogenesis. Cleaves PMEL within the M-beta fragment to release the amyloidogenic PMEL luminal fragment containing M-alpha and a small portion of M-beta N-terminus. This is a prerequisite step for subsequent processing and assembly of PMEL fibrils into amyloid sheets (PubMed:23754390). Responsible also for the proteolytic processing of CLTRN in pancreatic beta cells (PubMed:21907142).

Cellular Location
Cell membrane; Single-pass type I membrane protein. Golgi apparatus. Endoplasmic reticulum. Endosome Melanosome. Note=Colocalizes with PMEL in stage I and II melanosomes.

Tissue Location
Brain. Present in neurons within the hippocampus, frontal cortex and temporal cortex (at protein level). Expressed at low levels in most peripheral tissues and at higher levels in colon, kidney, pancreas, placenta, prostate, stomach and trachea. Expressed at low levels in the brain. Found in spinal cord, medulla oblongata, substantia nigra and locus coruleus. Expressed in the ductal epithelium of both normal and malignant prostate.

BACE2 Antibody (Center) Blocking Peptide - Protocols

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

- Blocking Peptides

BACE2 Antibody (Center) Blocking Peptide - Images

BACE2 Antibody (Center) Blocking Peptide - Background

Cerebral deposition of amyloid beta peptide is an early and critical feature of Alzheimer's disease and a frequent complication of Down syndrome. Amyloid beta peptide is generated by proteolytic cleavage of amyloid precursor protein by 2 proteases, one of which is the protein encoded by BACE2. This gene localizes to the 'Down critical region' of chromosome 21. The encoded protein, a member of the peptidase A1 protein family, is a type I integral membrane glycoprotein and aspartic protease.

BACE2 Antibody (Center) Blocking Peptide - References

Clark, H.F., et al., Genome Res. 13(10):2265-2270 (2003).Basi, G., et al., J. Biol. Chem. 278(34):31512-31520 (2003).Barbiero, L., et al., Exp. Neurol. 182(2):335-345 (2003).Shi, X.P., et al., J. Biol. Chem. 278(23):21286-21294 (2003).Kondoh, K., et al., Breast Cancer Res. Treat. 78(1):37-44 (2003).