

BACE2B Antibody (C-term) Blocking Peptide
Synthetic peptide
Catalog # BP6105a**Specification**

BACE2B Antibody (C-term) Blocking Peptide - Product Information

Primary Accession [O9Y5Z0](#)
Other Accession [O9NZL1](#)

BACE2B Antibody (C-term) 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 [AP6105a](/product/products/AP6105a) was selected from the C-term region of human BACE2B. 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.

BACE2B Antibody (C-term) 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](http://www.uniprot.org/citations/10591213), PubMed: [11083922](http://www.uniprot.org/citations/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 coeruleus. Expressed in the ductal
epithelium of both normal and malignant prostate.

BACE2B Antibody (C-term) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

BACE2B Antibody (C-term) Blocking Peptide - Images

BACE2B Antibody (C-term) Blocking Peptide - Background

Amyloid-beta peptide aggregation is a signature of Alzheimer disease and a frequent complication
of adult Down syndrome patients. Amyloid-beta is generated by proteolytic processing of the
amyloid precursor protein (APP) by beta- and gamma-secretase at the N and C termini,
respectively. Presenilin-1 is involved in the gamma-secretase activity. BACE is a transmembrane
aspartyl protease with beta-secretase activity. BACE2, also termed ALP56 has 2 pepsin-like active
centers, a signal sequence, a propeptide, and a long C-terminal extension including a
transmembrane domain, with expression in a wide array of tissues. Northern blot analysis revealed
low expression of 2.0- and 2.6-kb BACE2 transcripts in most fetal and adult tissues, with higher
expression in adult colon, kidney, pancreas, placenta, prostate, stomach, and trachea. Low levels
were also detected in brain, with somewhat higher expression in medulla and spinal cord. In situ
hybridization analysis of rat brain found low-level BACE2 expression in contrast to BACE expression.
The BACE2 expression pattern does not appear to be consistent with that of a beta-secretase.
BACE2 has been mapped to 21q22.3, within the Down syndrome critical region.