

Active Recombinant Mouse Beta-Site APP-Cleaving Enzyme 2, His-tagged

Cat. No. Bace2-527M **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Recombinant Mouse β -site APP Cleaving Enzyme 2 was expressed with an N-terminal signal peptide and a C-terminal 6X His tag in *amurine myeloma cell line*, NSO. The purified, secreted rmBACE2 corresponds mainly to the active form with the N-terminal sequence of A63LEPV. The 406 amino acid sequence of rmBACE2 predicts a molecular mass of 44 kDa. By SDS-PAGE under reducing conditions, the apparent molecular mass of the active form is approximately 55 kDa.

Species

Mouse

Source

Mammalian Cells

Description

BACE2 is a close homolog of BACE1, a protease known to be an important enzyme involved in the cellular pathways that some believe lead to Alzheimer's disease. The physiological function and role of BACE2 in Alzheimer's disease is unknown. 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 this gene. 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. Three transcript variants encoding different isoforms have been described for this gene.

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Purity	>90%, as determined by SDS-PAGE and visualized by silver stain.
Activity	The specific activity, measured with 10 µM ES010 and 1 µg enzyme in 100 µL of 100 mM NaOAc, 1M NaCl, pH 3.0, at room temperature, is > 10 pmoles/min/µg.
Solubility	Lyophilized from a 0.2 µm filtered solution of 50mM Tris, 0.15 M NaCl, pH 7.5.
Protein Content	Measured by its ability to cleave a fluorogenic peptide substrate, Mca-KPLGL-Dpa-AR-NH ₂ . Cleavage of ES010 can be measured using excitation and emission wavelengths of 320 nm and 405 nm, respectively.
Storage	Lyophilized samples are stable for up to six months at -20°C to -70°C. Upon reconstitution, this cytokine, in the presence of a carrier protein, can be stored under sterile conditions at 2 - 8°C for one month or at -20°C to -70°C in a manual defrost freezer for three months without detectable loss of activity.

GENE INFORMATION

Gene Name	Bace2 beta-site APP-cleaving enzyme 2 [Mus musculus]
Synonyms	ARP1; asp 1; BAE2; DRAP; AEPLC; ALP56; ASP21; CDA13; CEAP1; AI850424; 1110059C24Rik; Bace2; beta-secretase 2; aspartyl protease 1; memapsin-1; membrane-associated aspartic protease 1; theta-secretase
Gene ID	56175
mRNA Refseq	NM_019517
Protein Refseq	NP_062390
UniProt ID	Q9JL18

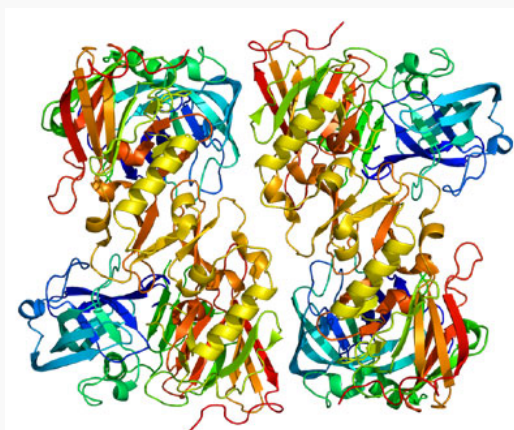
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Chromosome Location	16 C4
Pathway	Alzheimer"s disease
Function	aspartic-type endopeptidase activity; hydrolase activity; peptidase activity

PDB rendering based on 2ewy.



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