

Recombinant Human Beta-Site APP-Cleaving Enzyme 1

Cat. No. BACE1-31H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human BACE-1 is expressed in <i>E.coli</i> containing 366 amino acids 28-393. The BACE1 is purified by proprietary chromatographic techniques.
Species	Human
Source	<i>E.coli</i>
Protein Length	28-393 a.a.
Description	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 the protein encoded by this gene. BACE1 is 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. Four transcript variants encoding different isoforms have been described for this gene. BACE1 is responsible for the proteolytic processing of the amyloid precursor protein (APP). BACE-1 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.
Physical Appearance	Sterile Filtered clear solution.
Purity	Greater than 95% as determined by SDS-PAGE.

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Formulation	20 mM Tris, 20 mM KCl, 0.3 M NaCl and 10% glycerol, pH 7.8.
Applications	Recombinant BACE-1 is an excellent protein for proteases functional assays; highly active, excellent for BACE-1 inhibitor screen assay.
Stability	Store at 4°C if entire vial will be used within 1-2 weeks. Store, frozen at -20°C for longer periods of time. Please prevent freeze-thaw cycles.

GENE INFORMATION

Gene Name	BACE1 beta-site APP-cleaving enzyme 1 [Homo sapiens]
Synonyms	BACE1; beta-site APP-cleaving enzyme 1; P2; BACE; HSPC104; FLJ90568; KIAA1149; beta-site APP-cleaving enzyme; Beta-secretase 1; Beta-site amyloid precursor protein cleaving enzyme 1; Membrane-associated aspartic protease 2; Memapsin-2; Asp 2; ASP2; EC 3.4.23.46; Memapsin-2; APP beta-secretase; Aspartyl protease 2; Beta-site APP cleaving enzyme 1; Beta-site amyloid precursor protein cleaving enzyme 1; Membrane-associated aspartic protease 2; beta-site APP-cleaving enzyme; beta-site amyloid beta A4 precursor protein-cleaving enzyme; beta-site amyloid precursor protein cleaving enzyme; transmembrane aspartic proteinase Asp2
Gene ID	23621
mRNA Refseq	NM_012104
Protein Refseq	NP_036236
UniProt ID	P56817
Chromosome	11q23.2-q23.3

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Location	
MIM	604252
Pathway	Alzheimer"s disease
Function	aspartic-type endopeptidase activity; beta-aspartyl-peptidase activity; peptidase activity; protein binding
PDB rendering based on 1fkn.	