

## 32-6677: BACE1 Human

**Application :** Functional Assay

**Alternative Name :**

Beta-Secretase, Membrane-Associated Aspartic Protease, Beta-Site APP Cleaving Enzyme, Beta-Site APP-Cleaving Enzyme, Aspartyl Protease, EC 3.4.23.46, Memapsin-2, Asp, BACE,  $\beta$ ASP2, Beta-Site Amyloid Beta A4 Precursor Protein-Cleaving Enzyme, Beta-Site Amyloid Precursor Protein Cleaving Enzyme, Transmembrane Aspartic Proteinase Asp2, Beta-Secretase 1 Precursor Variant, Beta-Site APP-Cleaving Enzyme, APP Beta-Secretase, EC 3.4.23, KIAA1149, HSPC104.

### Description

Source: Sf9, Baculovirus cells.

Sterile Filtered colorless solution.

Beta-secretase 1 $\beta$  or BACE1 or beta-site amyloid precursor protein cleaving enzyme 1, is a $\beta$  protein that is encoded by the $\beta$  BACE1 $\beta$  gene in humans. Expression of BACE1 is seen primarily in $\beta$  neurons as it is crucial for the creation of myelin sheaths in the peripheric nervous system. Beta-secretase 1 $\beta$  is a protease that is located in the cell membrane (transmembrane). The enzyme consists of 2 active sites (aspartate residues) in the extracellular domain that can act as a dimer.

BACE1 Human  $\beta$  produced in Sf9 Baculovirus cells is a single, glycosylated polypeptide chain containing 442 amino acids (22-457 a.a.) and having a molecular mass of 49.2kDa. BACE1 is expressed with a 6 amino acid His tag at C-Terminus and purified by proprietary chromatographic techniques.

### Product Info

**Amount :** 10  $\mu$ g / 50  $\mu$ g

**Purification :** Greater than 90.0% as determined by SDS-PAGE.

**Content :** BACE1 protein solution containing Phosphate-Buffered Saline (pH 7.4) containing 10% glycerol.

**Storage condition :** Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

**Amino Acid :** TQHGIRLPLR SGLGGAPLGL RLPRETDEEP EEPGRRGSFV EMVDNLRGKS GQGYVEMTV GSPPQTLNIL VDTGSSNFAV GAAPHPFLHR YYQRQLSSTY RDLRKGYYVP YTQGWEGEL GTDLVSIPHG PNVTVRANIA AITESDKFFI NGSNWEGILG LAYAEIARPD DSLEPFFDSL VKQTHVPNLF SLQLCGAGFP LNQSEVLASV GGSMIIGGID HSLYTGSLWY TPIRREWYVE VIIVRVEING QDLKMDCKEY NYDKSIVDSG TTNLRLPKKV FEA AVKSIKA ASSTEKFPDG FWLGEQLVCW QAGTTPWNIF PVISLYLMGE VTNQSFRTI LPQYLRPVE DVATSQDDCY KFAISQSSTG TVMGAVIMEG FYVVFDRARK RIGFAVSACH VHDEFRTAAV EGPFVTL DME DCGYNIPQTD ESTLMTHHHH HH.

### Application Note

Specific activity is > 5 pmol/min/ $\mu$ g in which one unit will convert 1.0 pmole of Mca-SEVNLDAEFRK(Dnp)RR-NH<sub>2</sub> to MCA- Pro-Leu-OH per minute at pH 3.5 at 25C.