

Recombinant human BACE-1 protein

Catalog Number: ATGP3917

PRODUCT INFORMATION

Expression system

Baculovirus

Domain

22-457aa

UniProt No.

P56817

NCBI Accession No.

NP_036236

Alternative Names

BACE1, Beta-secretase 1, Aspartyl protease 2, ASP2, Asp 2, Beta-site amyloid precursor protein cleaving enzyme 1, Beta-site APP cleaving enzyme 1, Memapsin-2, Membrane-associated aspartic protease 2, BACE, KIAA1149, HSPC104

PRODUCT SPECIFICATION

Molecular Weight

49.2 kDa (442aa)

Concentration

0.5mg/ml (determined by BCA assay)

Formulation

Liquid in. Phosphate-Buffered Saline (pH 7.4) containing 10% glycerol

Purity

> 90% by SDS-PAGE

Endotoxin level

< 1 EU per 1ug of protein (determined by LAL method)

Biological Activity

Specific activity is > 5pmol/min/ug in which one unit will convert 1.0pmole of Mca-SEVNLDAEFRK(Dnp)RR-NH₂ to MCA- Pro-Leu-OH per minute at pH 3.5 at 25C.

Tag

His-Tag

Application

SDS-PAGE, Enzyme Activity

Storage Condition

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

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BACKGROUND

Description

BACE-1, also known as beta-secretase 1 isoform A, is a member of aspartic protease and an integral membrane protein. It is involved in the proteolytic processing of the amyloid precursor protein (APP). This protein cleaves at the N-terminus of the A-beta peptide sequence of APP, and then 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. It has been implicated in the onset and/or progression of Alzheimer's disease. It is also distantly related to the pathogenic aspartic-acid protease plasmepsin, which is a potential target for future anti-malarial drugs. Recombinant human BACE-1, fused to His-tag at C-terminus, was expressed in insect cell and purified by using conventional chromatography techniques.

Amino acid Sequence

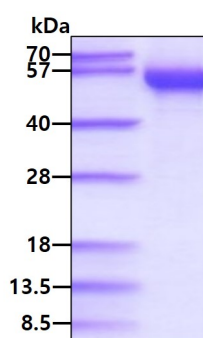
TQHGIPLRLR SGLGGAPLGL RLPRETDEEP EEPGRRGSFV EMVDNLRGKS GQGYVEMTV GSPPQTLNIL VDTGSSNFAV
GAAPHPFLHR YYQRQLSSTY RDLRKGVYVP YTQGWEGEL GTDLVSIPHG PNVTVRANIA AITESDKFFI NGSNWEGILG
LAYAEIARPD DSLEPFFDSL VKQTHVPNLF SLQLCGAGFP LNQSEVLASV GGSMIIGGID HSLYTGSLWY TPIRREWYIE
VIIVRVEING QDLKMDCKEY NYDKSIVDSG TTNLRLPKKV FEAIVKSIKA ASSTEKFPDG FWLGEQLVCW QAGTTPWNIF
PVISLYLMGE VTNQSFRTI LPQQYLRPVE DVATSQDDCY KFAISQSSTG TVMGAVIMEG FYVVFDRARK RIGFAVSACH
VHDEFRTAAV EGPFTVLDME DCGYNIPQTD ESTLMT<HHHH HH>

General References

Andrew RJ., et al. (2013) Proc Natl Acad Sci U S A. 114:E9665-E9674.
Brendel M., et al. (2018) Theranostics. 8:4957-4968.

DATA

SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.