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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

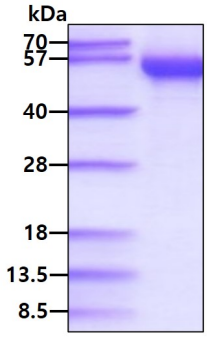
TQHGIRLPLR SGLGGAPLGL RLPRETDEEP EEPGRRGSFV EMVDNLRGKS GQGYYVEMTV GSPPQTLNIL VDTGSSNFAV GAAPHPFLHR YYQRQLSSTY RDLRKGVYVP YTQGKWEGEL GTDLVSIPHG PNVTVRANIA AITESDKFFI NGSNWEGILG LAYAEIARPD DSLEPFFDSL VKQTHVPNLF SLQLCGAGFP LNQSEVLASV GGSMIIGGID HSLYTGSLWY TPIRREWYYE VIIVRVEING QDLKMDCKEY NYDKSIVDSG TTNLRLPKKV FEAAVKSIKA ASSTEKFPDG FWLGEQLVCW QAGTTPWNIF PVISLYLMGE VTNQSFRITI LPQQYLRPVE DVATSQDDCY KFAISQSSTG TVMGAVIMEG FYVVFDRARK RIGFAVSACH VHDEFRTAAV EGPFVTLDME 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.