

# Recombinant mouse BACE-2 protein

Catalog Number: ATGP4110

## PRODUCT INFORMATION

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### Expression system

HEK293

### Domain

20-462aa

### UniProt No.

Q9JL18

### NCBI Accession No.

NP\_062390.3

### Alternative Names

ARP1, ASP1, ASP21, BAE2, CDA13, CEAP1, DRAP, 1110059C24Rik, AEPLC, AI850424, ALP56, beta-site APP-cleaving enzyme 2, beta-secretase 2, Aspartyl protease 1, Asp 1, Beta-site amyloid precursor protein cleaving enzyme 2, Memapsin-1, Membrane-associated aspartic protease 1, Theta-secretase

## PRODUCT SPECIFICATION

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### Molecular Weight

48.6kDa (449aa)

### Concentration

0.25mg/ml (determined by Absorbance at 280nm)

### Formulation

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

### Purity

> 95% by SDS-PAGE

### Endotoxin level

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

### Biological Activity

Specific activity is > 20 pmol/min/ug in which one unit will convert 1.0pmole of Mca-SEVNLDAEFRK(Dnp)RR-NH<sub>2</sub> 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-2, also known as beta secretase 2, belongs to the peptidase A1 family. It is an aspartic protease that is a close homolog of BACE-1. However, BACE-2 differs from BACE-1 in several aspects including pro-enzyme activation, substrate binding sites, transcriptional regulation, and function in A $\beta$  peptide production. It has been shown to play a key role in insulin receptor trafficking in the pancreas where it is expressed in  $\beta$  cells and affects glucose tolerance and was suggested as a promising target for improving  $\beta$  cell function in diabetes. Recombinant mouse BACE-2, fused to His-tag at C-terminus, was expressed in HEK293 cell and purified by using conventional chromatography techniques.

### Amino acid Sequence

AVPALAPAPF TLPLQVARAT NHRASAVPGL GPELPRADG LALALEPVRA TANFLAMVDN LQGDSGRGYY LEMLIGTPPQ  
KVQILVDTGS SNFAVAGAPH SYIDTYFDSE SSSTYHSGKF DVTVKYTQGS WTGFVGEDLV TIPKGFNSSF LVNIATIFES  
ENFFLPGIKW NGILGLAYAA LAKPSSSLET FFDSLVAQAK IPDIFSMQMC GAGLPVAGSG TNGGSLVLGG IEPSLYKGGI  
WYTPIKEEWY YQIEILKLEI GGQNLNLD CR EYNADKAIVD SGTLLRLPQ KVFDVAVVEAV ARTSLIPEFS DGFWTGAQLA  
CWTNSETPWA YFPKISIIYLR DENASRSFRI TILPQLYIQP MMGAGFNYEC YRFGISSSTN ALVIGATVME GFYVVFDRQA  
RRVGFVAVSPC AEIEGTTVSE ISGPFSTEDI ASNCVPAQAL NEP<HHHHHH>

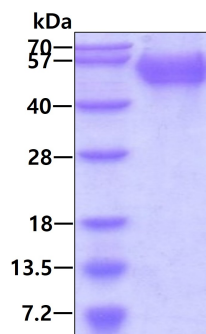
### General References

Sun, X. et al. (2006) FASEB J. 19:739-749.

Hussain, I. et al. (2001) J. Biol. Chem. 276:23322-23328.

## DATA

### SDS-PAGE



3 $\mu$ g by SDS-PAGE under reducing condition and visualized by coomassie blue stain