

Recombinant human Insulysin/IDE protein

Catalog Number: ATGP4128

PRODUCT INFORMATION

Expression system

Baculovirus

Domain

42-1019aa

UniProt No.

P14735

NCBI Accession No.

NP_004960.2

Alternative Names

Insulin-degrading enzyme, insulin-degrading enzyme isoform 1, Abeta-degrading protease, Insulin protease, Insulysin, IDE

PRODUCT SPECIFICATION

Molecular Weight

114kDa (984aa)

Concentration

0.5mg/ml (determined by Absorbance at 280nm)

Formulation

Liquid in. 20mM Tris-HCl buffer (pH 7.5) containing 100mM NaCl, 0.05% Brij35, 10% glycerol

Purity

> 90% by SDS-PAGE

Endotoxin level

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

Biological Activity

Specific activity is > 3,000 pmol/min/ug in which one unit will convert 1.0 pmole of Mca-RPPGFSAFK(Dnp)-OH to MCA-Pro-Leu-OH per minute at pH 7.5 at 25°C.

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

Insulysin/IDE, also known insulin-degrading enzyme, is a zinc metallopeptidase of the inverzincin family. This enzyme catalyses the degradation reaction of insulin, glucagon and other polypeptides. It is present in mammals and in many arthropods such as the fly *Drosophila melanogaster*. It is also expressed in many tissues, with the highest levels in liver, kidney, brain, and testis. It has been shown to degrade the amyloid beta peptide, which polymerizes into the plaques associated with Alzheimers disease. Therefore, the deficiency of IDE activity may contribute to the pathogenesis of type 2 diabetes mellitus and Alzheimers disease. Recombinant human Insulysin/IDE, fused to His-tag at C-terminus, was expressed in insect cell and purified by using conventional chromatography techniques.

Amino acid Sequence

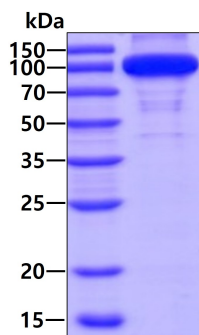
MNNPAIKRIG NHITKSPEDK REYRGLELAN GIKVLLISDP TTDKSSAALD VHIGLSLSDPP NIAGLSHFCE HMLFLGTTKKY
 PKENEYSQFL SEHAGSSNAF TSGEHTNYFF DVSHEHLEGA LDRFAQFFLC PLFDESCCKDR EVNAVDSEHE KNVMNDAWRL
 FQLEKATGNP KHPFSKFGTG NKYTLETRPN QEGIDVRQEL LKFHSAYYSS NLMAVCVLGR ESLDDLTLNLV VKLFSEVENK
 NVPLPEFPEH PFQEEHLKQL YKIVPIKDIR NLYVTFPIPD LQKYYSNPG HYLGHGHE GPGSLLSELK SKGWVNTLVG
 GQKEGARGFM FFIINVDLTE EGLLHVEDII LHMFOYIQL RAEGPQEWVF QECKDLNAVA FRFKDKERPR GYTSKIAGIL
 HYYPLEEVL AEYLLEFRP DLIEMVLDKL RPENVRVAIV SKSFEGKTR TEEWYGTQYK QEAIPDEVIK KWQNADLNGK
 FKLPTKNEFI PTNFEILPLE KEATYPALI KDTAMSKLWF KQDDKFFLPK ACLNFEFFSP FAYVDPLHCN MAYLYLELLK
 DSLNEYAYAA ELAGLSYDLQ NTIYGMYSV KGYNDKQPIL LKKIIEKMAT FEIDEKRFEI IKEAYMRS LN NFRAEQPHQH
 AMYYLRLLMT EVAWTKDELK EALDDVTLPR LKAFIPQLLS RLHIEALLHG NITKQAALGI MQMVEDTLIE HAHTKPLLPS
 QLVRYREVQL PDRGWFVYQQ RNEVHNNCGI EIYYQTDMS TSENMFLF CQIIEPCFN TLRTKEQLGY IVFSGPRRAN
 GIQGLRFIIQ SEKPPHYLES RVEAFLITME KSIEDMTEEA FQKHIQALAI RRLDKPKKLS AECAKYWGEI ISQYNFDRD
 NTEVAYLKTL TKEDIKFKYK EMLAVDAPRR HKVSVHVLAR EMDSCPVVG FPCQNDINLS QAPALPQPEV IQNMTEFKRG
 LPLFPLVKPH INFMAAKL<HH HHH>

General References

- Affholter J. A., et al. (1988) *Science*. 242:1415-1418.
- Duckworth W.C., et al. (1998) *Endocr. Rev.* 19:608-624.
- Akiyama H., et al. (1990) *Biochem. Biophys. Res. Commun.* 170:1325-1330.

DATA

SDS-PAGE



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