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.



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 VHIGSLSDPP NIAGLSHFCE HMLFLGTKKY PKENEYSQFL SEHAGSSNAF TSGEHTNYYF DVSHEHLEGA LDRFAQFFLC PLFDESCKDR EVNAVDSEHE KNVMNDAWRL FQLEKATGNP KHPFSKFGTG NKYTLETRPN QEGIDVRQEL LKFHSAYYSS NLMAVCVLGR ESLDDLTNLV VKLFSEVENK NVPLPEFPEH PFQEEHLKQL YKIVPIKDIR NLYVTFPIPD LQKYYKSNPG HYLGHLIGHE GPGSLLSELK SKGWVNTLVG GQKEGARGFM FFIINVDLTE EGLLHVEDII LHMFQYIQKL RAEGPQEWVF QECKDLNAVA FRFKDKERPR GYTSKIAGIL HYYPLEEVLT AEYLLEEFRP DLIEMVLDKL RPENVRVAIV SKSFEGKTDR TEEWYGTQYK QEAIPDEVIK KWQNADLNGK FKLPTKNEFI PTNFEILPLE KEATPYPALI KDTAMSKLWF KQDDKFFLPK ACLNFEFFSP FAYVDPLHCN MAYLYLELLK DSLNEYAYAA ELAGLSYDLQ NTIYGMYLSV KGYNDKQPIL LKKIIEKMAT FEIDEKRFEI IKEAYMRSLN NFRAEQPHQH AMYYLRLLMT EVAWTKDELK EALDDVTLPR LKAFIPQLLS RLHIEALLHG NITKQAALGI MQMVEDTLIE HAHTKPLLPS QLVRYREVQL PDRGWFVYQQ RNEVHNNCGI EIYYQTDMQS TSENMFLELF CQIISEPCFN TLRTKEQLGY IVFSGPRRAN GIQGLRFIIQ SEKPPHYLES RVEAFLITME KSIEDMTEEA FQKHIQALAI RRLDKPKKLS AECAKYWGEI ISQQYNFDRD NTEVAYLKTL TKEDIIKFYK EMLAVDAPRR HKVSVHVLAR EMDSCPVVGE FPCQNDINLS QAPALPQPEV IQNMTEFKRG LPLFPLVKPH INFMAAKL<HH HHHH>

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