# Product Data Sheet

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| Product Name: | IDE Human |
| Cat. No.: | GP21817 |
| Batch No.: | 1 |

## Product Data

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| Purity | >98% | Source | Escherichia Coli. |
| Phycical Appearance | solid | Shipping Condition | Shipped with Ice Packs. |
| Synonyms | Insulin-Degrading Enzyme; Abeta-Degrading Protease; Insulin Protease; EC 3.4.24.56; Insulinase; INSULYSIN; Insulysin; EC 3.4.24; IDE. | | |
| Amino Acid Sequence | MRYRLAWLLH PALPSTFRSV LGARLPPPER LCGFQKKTYS KMNNPAIKRI GNHITKSPED KREYRGLELA NGIKVLLISD PTTDKSSAAL DVHIGSLSDP PNIAGLSHFC EHMLFLGTKK YPKENEYSQF LSEHAGSSNA FTSGEHTNYY FDVSHEHLEG ALDRFAQFFL CPLFDESCKD REVNAVDSEH EKNVMNDAWR LFQLEKATGN PKHPFSKFGT GNKYTLETRP NQEGIDVRQE LLKFHSAYYS SNLMAVCVLG RESLDDLTNL VVKLFSEVEN KNVPLPEFPE HPFQEEHLKQ LYKIVPIKDI RNLYVTFPIP DLQKYYKSNP GHYLGHLIGH EGPGSLLSEL KSKGWVNTLV GGQKEGARGF MFFIINVDLT EEGLLHVEDI ILHMFQYIQK LRAEGPQEWV FQECKDLNAV AFRFKDKERP RGYTSKIAGI LHYYPLEEVL TAEYLLEEFR PDLIEMVLDK LRPENVRVAI VSKSFEGKTD RTEEWYGTQY KQEAIPDEVI KKWQNADLNG KFKLPTKNEF IPTNFEILPL EKEATPYPAL IKDTAMSKLW FKQDDKFFLP KACLNFEFFS PFAYVDPLHC NMAYLYLELL KDSLNEYAYA AELAGLSYDL QNTIYGMYLS VKGYNDKQPI LLKKIIEKMA TFEIDEKRFE IIKEAYMRSL NNFRAEQPHQ HAMYYLRLLM TEVAWTKDEL KEALDDVTLP RLKAFIPQLL SRLHIEALLH GNITKQAALG IMQMVEDTLI EHAHTKPLLP SQLVRYREVQ LPDRGWFVYQ QRNEVHNNCG IEIYYQTDMQ STSENMFLEL FCQIISEPCF NTLRTKEQLG YIVFSGPRRA NGIQGLRFII QSEKPPHYLE SRVEAFLITM EKSIEDMTEE AFQKHIQALA IRRLDKPKKL SAECAKYWGE IISQQYNFDR DNTEVAYLKT LTKEDIIKFY KEMLAVDAPR RHKVSVHVLA REMDSCPVVG EFPCQNDINL SQAPALPQPE VIQNMTEFKR GLPLFPLVKP HINFMAAKL E HHHHHH. | | |
| Formulation | IDE filtered (0.4μm) solution at a concentration of 0.6mg/ml in 20mM Tris buffer, 50mM NaCl, pH 8.0 and 10% (w/v) glycerol. | | |


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## Introduction

Insulin-Degrading Enzyme (IDE) is a zinc metallopeptidase which degrades intracellular insulin, and thus terminates insulins activity, as well as playing a part in intercellular peptide signaling by degrading various peptides such as amylin, bradykinin, and kallidin. The preferential affinity of the IDE enzyme for insulin results in insulin-mediated inhibition of the degradation of additional peptides such as beta-amyloid. Deficiencies in IDE protein's function are linked with Alzheimer's disease and type 2 diabetes mellitus nevertheless mutations in the IDE gene have not been demonstrated to be causative for these diseases. Insulin-Degrading Enzyme localizes mainly to the cytoplasm however in some cell types it localizes to the extracellular space, cell membrane, peroxisome, and mitochondrion. In addition, IDE degrades amyloid formed by APP and IAPP. Furthermore, IDE plays a part in the degradation and clearance of naturally secreted amyloid beta-protein by neurons and microglia.

## Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).Avoid multiple freeze-thaw cycles.

## Background

IDE Human Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain (Met1-Leu1019) containing 1026 amino acids including a 7 aa His tag at C-terminus. The total calculated molecular mass is 119kDa.


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