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IDE Blocking Peptide (Center)

Synthetic peptide
Catalog # BP1455c

Specification

IDE Blocking Peptide (Center) - Product Information

Primary Accession	P14735
Other Accession	P35559, Q9JHR7, Q24K02

IDE Blocking Peptide (Center) - Additional Information

Gene ID 3416

Other Names
Insulin-degrading enzyme, Abeta-degrading protease, Insulin protease, Insulinase, Insulysin, IDE

Target/Specificity
The synthetic peptide sequence is selected from aa 421-435 of HUMAN IDE

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

IDE Blocking Peptide (Center) - Protein Information

Name IDE {ECO:0000303|PubMed:20364150, ECO:0000312|HGNC:HGNC:5381}

Function
Plays a role in the cellular breakdown of

IDE Blocking Peptide (Center) - Background

IDE belongs to a protease family responsible for intercellular peptide signalling. Though its role in the cellular processing of insulin has not yet been defined, insulin-degrading enzyme is thought to be involved in the termination of the insulin response.

IDE Blocking Peptide (Center) - References

Vepsalainen,S.,J. Med. Genet. 44 (9), 606-608 (2007)
Kim,M.,J. Biol. Chem. 282 (11), 7825-7832 (2007)
Radulescu,R.T.,Int. J. Oncol. 30 (1), 73-80 (2007)
Li,Q.,Cell 127 (2), 305-316 (2006)

insulin, APP peptides, IAPP peptides, natriuretic peptides, glucagon, bradykinin, kallidin, and other peptides, and thereby plays a role in intercellular peptide signaling (PubMed:2293021, PubMed:10684867, PubMed:26968463, PubMed:17051221, PubMed:17613531, PubMed:18986166, PubMed:19321446, PubMed:23922390, PubMed:24847884, PubMed:26394692, PubMed:29596046, PubMed:21098034). Substrate binding induces important conformation changes, making it possible to bind and degrade larger substrates, such as insulin (PubMed:23922390, PubMed:26394692, PubMed:29596046). Contributes to the regulation of peptide hormone signaling cascades and regulation of blood glucose homeostasis via its role in the degradation of insulin, glucagon and IAPP (By similarity). Plays a role in the

degradation and clearance of APP-derived amyloidogenic peptides that are secreted by neurons and microglia (PubMed:9830016, PubMed:26394692) (Probable). Degrades the natriuretic peptides ANP, BNP and CNP, inactivating their ability to raise intracellular cGMP (PubMed:21098034). Also degrades an aberrant frameshifted 40-residue form of NPPA (fsNPPA) which is associated with familial atrial fibrillation in heterozygous patients (PubMed:21098034). Involved in antigen processing. Produces both the N terminus and the C terminus of MAGEA3-derived antigenic peptide (EVDPIGHLY) that is presented to cytotoxic T lymphocytes by MHC class I.

Cellular Location
Cytoplasm, cytosol. Cell membrane {ECO:0000250|UniProtKB:P35559}. Secreted Note=Present at the cell surface of neuron cells. The membrane- associated isoform is approximately 5 kDa larger than the known cytosolic isoform

Tissue Location
Detected in brain and in cerebrospinal fluid (at protein level).

IDE Blocking Peptide (Center) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides