

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 insulin, APP peptides, IAPP peptides, natriuretic peptides, glucagon, bradykinin, kallidin, and other peptides, and thereby plays a role in intercellular peptide signaling (PubMed: [2293021](http://www.uniprot.org/citations/2293021))

target="_blank">2293021, PubMed: [10684867](http://www.uniprot.org/citations/10684867) target="_blank">10684867, PubMed: [26968463](http://www.uniprot.org/citations/26968463) target="_blank">26968463, PubMed: [17051221](http://www.uniprot.org/citations/17051221) target="_blank">17051221, PubMed: [17613531](http://www.uniprot.org/citations/17613531) target="_blank">17613531, PubMed: [18986166](http://www.uniprot.org/citations/18986166) target="_blank">18986166, PubMed: [19321446](http://www.uniprot.org/citations/19321446) target="_blank">19321446, PubMed: [23922390](http://www.uniprot.org/citations/23922390) target="_blank">23922390, PubMed: [24847884](http://www.uniprot.org/citations/24847884) target="_blank">24847884, PubMed: [26394692](http://www.uniprot.org/citations/26394692) target="_blank">26394692, PubMed: [29596046](http://www.uniprot.org/citations/29596046) target="_blank">29596046, PubMed: [21098034](http://www.uniprot.org/citations/21098034)

target="_blank">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](#)

IDE Blocking Peptide (Center) - Images

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)