

**IDE Antibody**  
**Rabbit Polyclonal Antibody**  
**Catalog # ALS13658****Specification****IDE Antibody - Product Information**

|                   |                          |
|-------------------|--------------------------|
| Application       | WB, IHC-P                |
| Primary Accession | <a href="#">P14735</a>   |
| Reactivity        | Human                    |
| Host              | Rabbit                   |
| Clonality         | Polyclonal               |
| Calculated MW     | 118kDa KDa               |
| Dilution          | WB~~1:1000<br>IHC-P~~N/A |

**IDE Antibody - Additional Information****Gene ID** 3416**Other Names**

Insulin-degrading enzyme, 3.4.24.56, Abeta-degrading protease, Insulin protease, Insulinase, Insulysin, IDE

**Target/Specificity**

Human insulin degrading enzyme. Predicted cross-reactivity based on amino acid sequence homology: mouse (94%), rat (95%), bovine (98%), zebrafish (90%).

**Reconstitution & Storage**

Aliquot and store at -20°C. Minimize freezing and thawing.

**Precautions**

IDE Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**IDE Antibody - 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:<a href="http://www.uniprot.org/citations/10684867" target="\_blank">10684867</a>, PubMed:<a href="http://www.uniprot.org/citations/17051221" target="\_blank">17051221</a>, PubMed:<a href="http://www.uniprot.org/citations/17613531" target="\_blank">17613531</a>, PubMed:<a href="http://www.uniprot.org/citations/18986166" target="\_blank">18986166</a>, PubMed:<a href="http://www.uniprot.org/citations/19321446" target="\_blank">19321446</a>, PubMed:<a href="http://www.uniprot.org/citations/21098034" target="\_blank">21098034</a>, PubMed:<a href="http://www.uniprot.org/citations/2293021" target="\_blank">2293021</a>, PubMed:<a href="http://www.uniprot.org/citations/23922390" target="\_blank">23922390</a>).

target="\_blank">23922390</a>, PubMed:<a href="http://www.uniprot.org/citations/24847884" target="\_blank">24847884</a>, PubMed:<a href="http://www.uniprot.org/citations/26394692" target="\_blank">26394692</a>, PubMed:<a href="http://www.uniprot.org/citations/26968463" target="\_blank">26968463</a>, PubMed:<a href="http://www.uniprot.org/citations/29596046" target="\_blank">29596046</a>). Substrate binding induces important conformation changes, making it possible to bind and degrade larger substrates, such as insulin (PubMed:<a href="http://www.uniprot.org/citations/23922390" target="\_blank">23922390</a>, PubMed:<a href="http://www.uniprot.org/citations/26394692" target="\_blank">26394692</a>, PubMed:<a href="http://www.uniprot.org/citations/29596046" target="\_blank">29596046</a>). 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 (Probable) (PubMed:<a href="http://www.uniprot.org/citations/26394692" target="\_blank">26394692</a>, PubMed:<a href="http://www.uniprot.org/citations/9830016" target="\_blank">9830016</a>). Degrades the natriuretic peptides ANP, BNP and CNP, inactivating their ability to raise intracellular cGMP (PubMed:<a href="http://www.uniprot.org/citations/21098034" target="\_blank">21098034</a>). Also degrades an aberrant frameshifted 40-residue form of NPPA (fsNPPA) which is associated with familial atrial fibrillation in heterozygous patients (PubMed:<a href="http://www.uniprot.org/citations/21098034" target="\_blank">21098034</a>). 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).

#### **Volume**

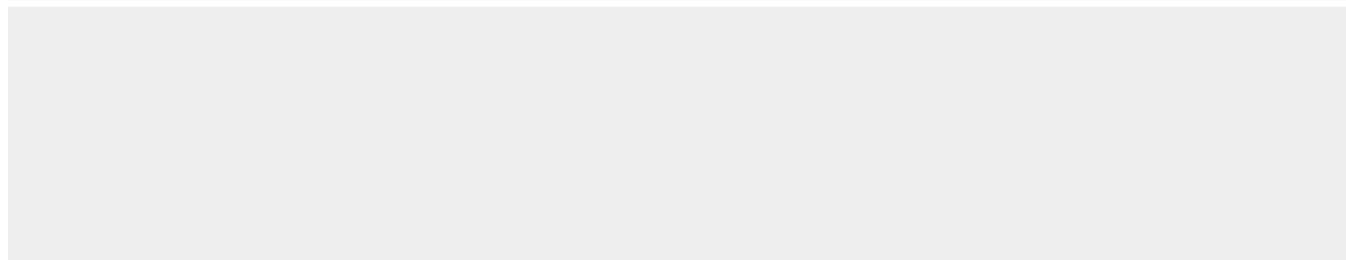
50 µl

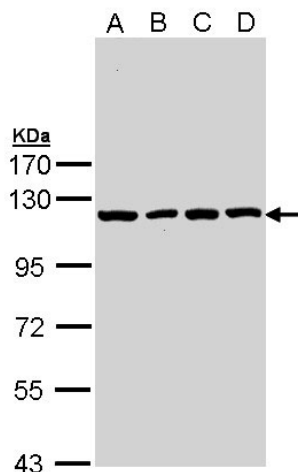
#### **IDE Antibody - Protocols**

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

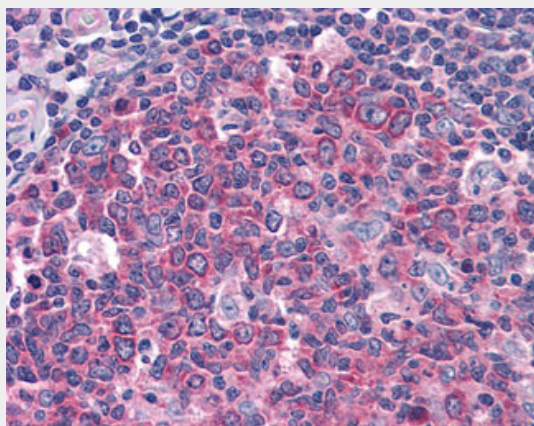
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### **IDE Antibody - Images**





Sample (30 ug of whole cell lysate).



Anti-IDE antibody IHC of human tonsil.

### IDE Antibody - Background

Plays a role in the cellular breakdown of insulin, IAPP, glucagon, bradykinin, kallidin and other peptides, and thereby plays a role in intercellular peptide signaling. Degrades amyloid formed by APP and IAPP. May play a role in the degradation and clearance of naturally secreted amyloid beta-protein by neurons and microglia.

### IDE Antibody - References

- Affholter J.A.,et al.Science 242:1415-1418(1988).
- Affholter J.A.,et al.Mol. Endocrinol. 4:1125-1135(1990).
- Ota T.,et al.Nat. Genet. 36:40-45(2004).
- Deloukas P.,et al.Nature 429:375-381(2004).
- Mural R.J.,et al.Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.