

**IDE Antibody (Center)**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP1455c**

### Specification

#### IDE Antibody (Center) - Product Information

Application	WB, IHC-P,E
Primary Accession	<a href="#">P14735</a>
Other Accession	<a href="#">P35559</a> , <a href="#">Q9JHR7</a> , <a href="#">Q24K02</a>
Reactivity	Human, Mouse
Predicted	Bovine, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Antigen Region	406-435

#### IDE Antibody (Center) - Additional Information

##### Gene ID 3416

##### Other Names

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

##### Target/Specificity

This IDE antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 406-435 amino acids from the Central region of human IDE.

##### Dilution

WB~~1:2000

IHC-P~~1:10~50

E~~Use at an assay dependent concentration.

##### Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

##### Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

##### Precautions

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

#### IDE Antibody (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:[10684867](#), PubMed:[17051221](#), PubMed:[17613531](#), PubMed:[18986166](#), PubMed:[19321446](#), PubMed:[21098034](#), PubMed:[2293021](#), PubMed:[23922390](#), PubMed:[24847884](#), PubMed:[26394692](#), PubMed:[26968463](#), PubMed:[29596046](#)). 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 (Probable) (PubMed:[26394692](#), PubMed:[9830016](#)). 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

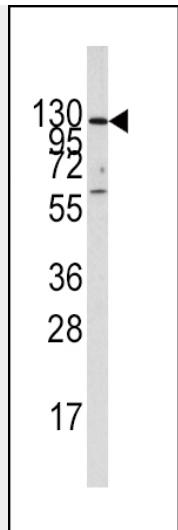
Detected in brain and in cerebrospinal fluid (at protein level).

#### IDE Antibody (Center) - Protocols

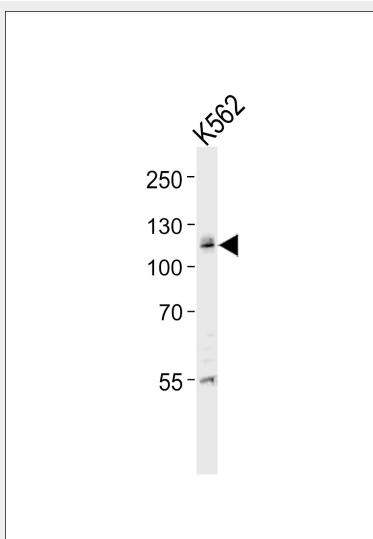
Provided below are standard protocols that you may find useful for product applications.

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

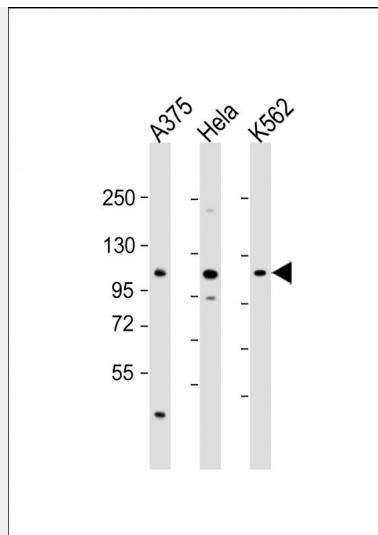
#### IDE Antibody (Center) - Images



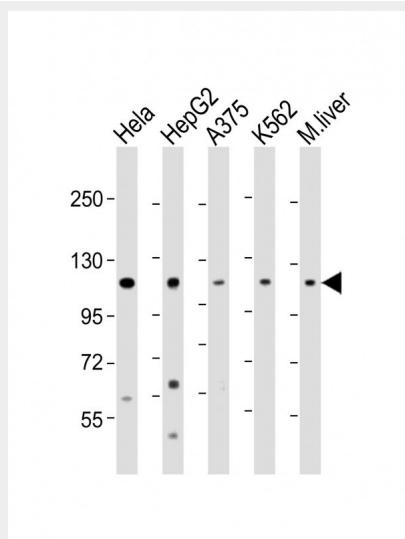
Western blot analysis of anti-IDE Antibody (Center) (Cat.#AP1455c) in A375 cell line lysates (35ug/lane). IDE (arrow) was detected using the purified Pab.



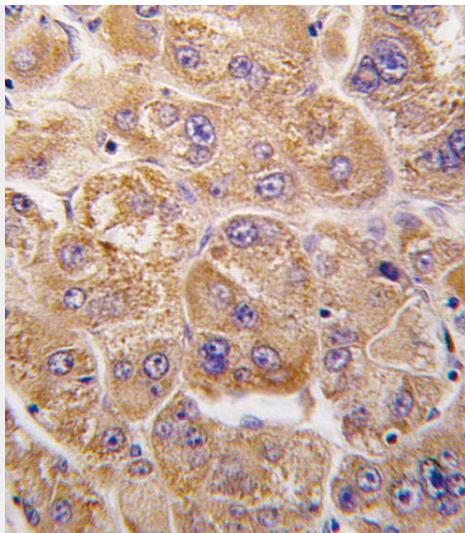
Western blot analysis of lysate from K562 cell line, using IDE Antibody (Center)(Cat. #AP1455c). AP1455c was diluted at 1:1000. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody. Lysate at 35ug.



All lanes : Anti-IDE Antibody (Center) at 1:2000 dilution Lane 1: A375 whole cell lysate Lane 2: HeLa whole cell lysate Lane 3: K562 whole cell lysate Lysates/proteins at 20  $\mu$ g per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 118 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



All lanes : Anti-IDE Antibody (Center) at 1:2000 dilution Lane 1: Hela whole cell lysate Lane 2: HepG2 whole cell lysate Lane 3: A375 whole cell lysate Lane 4: K562 whole cell lysate Lane 5: mouse liver lysate Lysates/proteins at 20  $\mu$ g per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 118 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Formalin-fixed and paraffin-embedded human hepatocarcinoma tissue reacted with IDE antibody (Center)(Cat.#AP1455c), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

#### **IDE Antibody (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 Antibody (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)

#### **IDE Antibody (Center) - Citations**

- [Promoting scientific standards in Germany.](#)
- [Complex formation between metabolic enzymes in tumor cells: unfolding the MDR1-IDE paradigm.](#)