SunLong Biotech Co.,LTD
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[Marker Primary Antibody]

Mouse Anti-IDE/FITC Conjugated antibody

Catalog Number: SL0018M-FITC

FOR RESEARCH USE ONLY

[DATASHEET]

Host:	Mouse
Isotype:	IgG
Clonality:	Polyclonal
Target:	Anti-IDE/FITC
Immunogen:	KLH conjugated synthetic peptide derived from human IDE
Purification:	affinity purified by Protein A
Concentration:	1mg/ml
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 1M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
Applications:	not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Reactivity:	Human,Mouse(predicted:Rat,Chicken,Pig,Cow)
Subcellular Location:	The cell membrane
Background:	background: Insulysin was identified nearly a century ago as an enzyme responsible for the degradation of insulin in cells, although the precise interactions between insulin and insulysin remain elusive. Human insulysin was cloned in 1988, and shown to be a 118 kDa protein that exists primarily as a homodimer, and perhaps also complexed with other molecules. The sequence is well conserved between humans, rats and mice, and the antibody recognizes these species. Insulysin is a metalloproteinase of the clan ME, family M16, which contains an active site HxxEH, a reversal of the canonical HExxH zinc binding motif. Considered a zinc metalloproteinase, the activity of insulysin can be blocked with EDTA or 1-10 phenanthroline. In addition to the active metalloproteinase domain, insulysin contains a second metalloproteinase site which is considered catalytically inactive, and is thought to assist in substrate binding. Insulysin is most closely related to the bacterial proteinase pitrilysin, (the human orthologue of which appears to be MPRP1) and the mammalian

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	proteinsae nardilysin. Generally thought to be a cytoplasmic protein, insulysin has been isolated from many different tissues and cell lines, and can degrade intact insulin, insulin B chain, glucagon, denatured hemoglobin, alpha amyloid protein, TGF alpha and amylin. Recent work implicates insulysin in clearing beta amyloid plaques from the brain, and has generated much interest in Alzheimer's disease research. The pH optimum for insulysin is basic, pH 8.5, which also distinguishes it from other metalloproteinases. Insulin degrading enzyme (IDE) has a preferential affinity for insulin such that the presence of insulin will inhibit IDE mediated degradation of other substrates. IDE degrades a variety of other peptides including atrial natriuretic peptide and amylin. IDE catabolizes A beta and has been implicated as a candidate enzyme responsible for the degradation and clearance of A beta in the brain. IDE has also been shown to degrade the APP intracellular domain (AICD), a product of gamma secretase cleaved APP that may function in nuclear signaling. **Function:** 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. **Subunit:** Homodimer. Can form higher oligomers. Interacts (via N-terminus) with varicella-zoster virus (VZV) envelope glycoprotein E (via N-terminus); the membrane-associated isoform may function as an entry receptor for this virus. **Subcellular Location:** Cytoplasm. Cell surface. Present at the cell surface of neuron cells. The membrane-associated isoform is approximately 5 kDa larger than the known cytosolic isoform. **Post-translational modifications:** The N-terminus is blocked. **Similarity:** Belongs to the peptidase M16 family. **Database links:** **Entrez Gene:** 3416 Human **Entrez Gene:** 15925 Mouse **Entrez Gene:** 25700 Rat Omim: 146680 Human **SwissProt:** P14735 Human **SwissProt:** Q9JHR7 Mouse **SwissProt:** P35559 Rat **Unigene:** 500546 Human **Unigene:** 28366 Mouse

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