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IDE Antibody Blocking Peptide

Catalog Number: bs-0018P
Activity: Not tested
Purification: HPLC
Storage: Shipped at 4°C. Stored at -20°C for one year. Avoid repeated freeze/thaw cycles.
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 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.