

IDE (K-20): sc-27266

BACKGROUND

Insulin degrading enzyme (IDE), initiates the cleavage of Insulin, resulting in Insulin response and resistance. However, IDE also degrades a variety of bioactive peptides, including amyloid- β peptides, implicating IDE in certain age-related changes seen in Alzheimer's disease. Studies show that when the expression of the IDE gene (chromosome 10q23.33) is altered, changes occur not only in glucose homeostasis, but also in the levels of brain A β 40 and A β 42 peptides. An IDE inhibitor, bacitracin, inhibits degradation of both Insulin and amylin, indicating that both are degraded through a common proteolytic pathway. Variations in the rate of proteolysis suggest that the function of IDE exhibits conformational dependence, which may lead to possible therapeutic interventions for diabetes, AD, and other diseases associated with IDE substrate proteolysis.

REFERENCES

1. Seta, K.A., et al. 1997. Overexpression of Insulin degrading enzyme: cellular localization and effects on Insulin signalling. *Biochem. Biophys. Res. Commun.* 231: 167-171.
2. Ling, Y., et al. 2003. Amyloid precursor protein (APP) and the biology of proteolytic processing: relevance to Alzheimer's disease. *Int. J. Biochem. Cell Biol.* 35: 1505-1535.
3. Miller, B.C., et al. 2003. Amyloid- β peptide levels in brain are inversely correlated with insulysin activity levels *in vivo*. *Proc. Natl. Acad. Sci. USA* 100: 6221-6226.
4. Bennett, R.G., et al. 2003. An Insulin-degrading enzyme inhibitor decreases amylin degradation, increases amylin-induced cytotoxicity, and increases amyloid formation in Insulinoma cell cultures. *Diabetes* 52: 2315-2320.
5. Song, E.S., et al. 2003. Substrate activation of Insulin degrading enzyme (insulysin): A potential target for drug development. *J. Biol. Chem.* 278: 49789-49794.

CHROMOSOMAL LOCATION

Genetic locus: IDE (human) mapping to 10q23.33; Ide (mouse) mapping to 19 C2.

SOURCE

IDE (K-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of IDE of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-27266 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

IDE (K-20) is recommended for detection of IDE of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

IDE (K-20) is also recommended for detection of IDE in additional species, including equine, canine, bovine, porcine and avian.

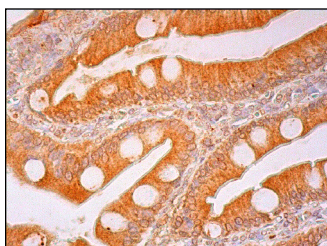
Suitable for use as control antibody for IDE siRNA (h): sc-106817, IDE siRNA (m): sc-146140, IDE shRNA Plasmid (h): sc-106817-SH, IDE shRNA Plasmid (m): sc-146140-SH, IDE shRNA (h) Lentiviral Particles: sc-106817-V and IDE shRNA (m) Lentiviral Particles: sc-146140-V.

Positive Controls: SK-N-SH cell lysate: sc-2410 or rat liver extract: sc-2395.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



IDE (K-20): sc-27266. Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic and perinuclear staining of glandular cells.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

MONOS
Satisfaction
Guaranteed

Try **IDE (F-9): sc-393887** or **IDE (E-4): sc-514458**, our highly recommended monoclonal alternatives to IDE (K-20).