SANTA CRUZ BIOTECHNOLOGY, INC.

IDE (A-23): sc-130784

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 10q23.3) is altered, changes occur not only in glucose homeostasis, but also in the levels of brain Aβ40 and Aβ42 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.

CHROMOSOMAL LOCATION

Genetic locus: IDE (human) mapping to 10q23.33.

SOURCE

IDE (A-23) is a purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of IDE of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

IDE (A-23) is recommended for detection of IDE of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

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

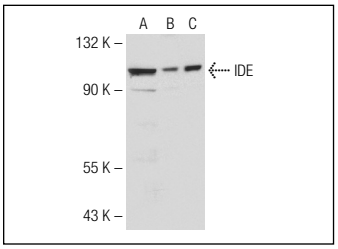
Molecular Weight of IDE: 118 kDa.

Positive Controls: A-375 cell lysate: sc-3811, Hep G2 cell lysate: sc-2227 or MES-SA/Dx5 cell lysate: sc-2284.

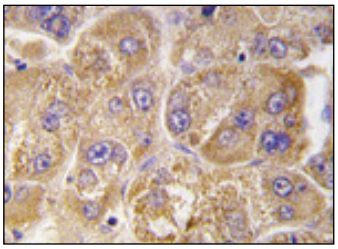
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



IDE (A-23): sc-130784. Western blot analysis of IDE expression in MES-SA/Dx5 (**A**), Hep G2 (**B**) and A-375 (**C**) whole cell lysates.



IDE (A-23): sc-130784. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human hepatocarcinoma tissue showing cytoplasmic localization.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.