# SANTA CRUZ BIOTECHNOLOGY, INC.

# SNED1 (F-13): sc-137780



# BACKGROUND

SNED1 (Sushi, nidogen and EGF-like domain-containing protein 1), also known as IRE-BP1 (insulin-responsive element DNA-binding protein 1), is a 1,413 amino acid secreted protein that contains 15 EGF-like domains, 3 fibronectin type-III domains, 2 follistatin-like domains, one NIDO domain and one Sushi domain. SNED1 binds and transactivates Insulin-like growth factor-binding protein-3 and other Insulin responsive genes downstream of the phosphatidylinositol 3'-kinase/protein kinase B (Akt) pathway. SNED1 is localized to the cytoplasm in  $\alpha$ ,  $\beta$ , and  $\delta$ -cells of the islets of Langerhans. Expression of SNED1 is decreased in diabetes and Insulin-deficiency, suggesting that it plays a role in the mediation of Insulin action. There are four isoforms of SNED1 that are produced as a result of alternative splicing events.

# REFERENCES

- 1. Villafuerte, B.C., et al. 2004. Insulin-response element-binding protein 1: a novel Akt substrate involved in transcriptional action of Insulin. J. Biol. Chem. 279: 36650-36659.
- 2. Villafuerte, B.C. and Kaytor, E.N. 2005. An Insulin-response element-binding protein that ameliorates hyperglycemia in diabetes. J. Biol. Chem. 280: 20010-20020.
- 3. Takeoshi, K. and Nakai, T. 2005. Insulin-like growth factor binding protein-3 (IGFBP-3). Nippon Rinsho 63: 180-182.
- 4. Renehan, A.G., et al. 2006. Insulin-like growth factor (IGF)-I, IGF binding protein-3, and breast cancer risk: eight years on. Endocr. Relat. Cancer 13: 273-278.
- 5. Yadav, S. and Krishnamurthy, S. 2007. Insulin like growth factors and growth hormone deficiency. Indian Pediatr. 44: 349-353.
- 6. Chahal, J., et al. 2008. Regulation of Insulin-response element binding protein-1 in obesity and diabetes: potential role in impaired Insulininduced gene transcription. Endocrinology 149: 4829-4836.
- 7. Villafuerte, B.C., et al. 2009. Transgenic expression of Insulin-response element binding protein-1 in  $\beta$ -cells reproduces type 2 diabetes. Endocrinology 150: 2611-2617.

# CHROMOSOMAL LOCATION

Genetic locus: SNED1 (human) mapping to 2q37.3; Sned1 (mouse) mapping to 1 D.

## SOURCE

SNED1 (F-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of SNED1 of human origin.

# PRODUCT

Each vial contains 200 µg lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-137780 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

#### **APPLICATIONS**

SNED1 (F-13) is recommended for detection of SNED1 isoforms 1-4 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

SNED1 (F-13) is also recommended for detection of SNED1 isoforms 1-4 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for SNED1 siRNA (h): sc-94914, SNED1 siRNA (m): sc-153653, SNED1 shRNA Plasmid (h): sc-94914-SH, SNED1 shRNA Plasmid (m): sc-153653-SH, SNED1 shRNA (h) Lentiviral Particles: sc-94914-V and SNED1 shRNA (m) Lentiviral Particles: sc-153653-V.

Molecular Weight of SNED1 isoforms 1-4: 152/145/147/142 kDa.

## **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<sup>™</sup> Mounting Medium: sc-24941.

### **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.