

Secretoneurin (T-16): sc-54327

BACKGROUND

Secretoneurin-2 (Sg II), also known as SCG2, Chromogranin-C or CHGC, is a 617 amino acid precursor protein that is cleaved to produce a 32 amino acid active peptide known as Secretoneurin (or SN). Secretoneurin is a secreted peptide that is thought to exert chemotactic effects on specific cells, indicating a possible role in cellular movement in response to environmental stimuli. The gene encoding the Secretoneurin-2 precursor maps to human chromosome 2, which houses over 1,400 genes and comprises nearly 8% of the human genome. Harlequin ichthyosis, a rare and morbid skin deformity, is associated with mutations in the chromosome 2-localized ABCA12 gene, while the lipid metabolic disorder sitosterolemia is associated with defects in the ABCG5 and ABCG8 genes, which also map to chromosome 2.

REFERENCES

- Gerdes, H.H., et al. 1989. The primary structure of human secretogranin II, a widespread tyrosine-sulfated secretory granule protein that exhibits low pH- and calcium-induced aggregation. *J. Biol. Chem.* 264: 12009-12015.
- Giudici, A.M., et al. 1992. Immunolocalization of secretogranin II, chromogranin A, and chromogranin B in differentiating human neuroblastoma cells. *Eur. J. Cell Biol.* 58: 383-389.
- Vallet, V.S., et al. 1997. Secretogranin II (SgII) distribution and processing studies in human normal and adenomatous anterior pituitaries using new polyclonal antibodies. *Regul. Pept.* 68: 155-163.
- Dunzendorfer, S., et al. 1998. Secretoneurin, a novel neuropeptide, is a potent chemoattractant for human eosinophils. *Blood* 91: 1527-1532.
- Anouar, Y., et al. 1998. Identification of a novel secretogranin II-derived peptide (SgIII(187-252)) in adult and fetal human adrenal glands using antibodies raised against the human recombinant peptide. *J. Clin. Endocrinol. Metab.* 83: 2944-2951.
- Scammell, J.G., et al. 2000. Isolation and characterization of the human secretogranin II gene promoter. *Brain Res. Mol. Brain Res.* 75: 8-15.
- Kähler, C.M., et al. 2002. Transendothelial migration of leukocytes and signalling mechanisms in response to the neuropeptide secretoneurin. *Regul. Pept.* 105: 35-46.
- Kirchmair, R., et al. 2004. The neuropeptide secretoneurin acts as a direct angiogenic cytokine *in vitro* and *in vivo*. *Circulation* 109: 777-783.
- Fischer-Colbrie, R., et al. 2005. Secretoneurin: a new player in angiogenesis and chemotaxis linking nerves, blood vessels and the immune system. *Curr. Protein Pept. Sci.* 6: 373-385.

CHROMOSOMAL LOCATION

Genetic locus: SCG2 (human) mapping to 2q36.1; Scg2 (mouse) mapping to 1 C4.

SOURCE

Secretoneurin (T-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of secretogranin II of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-54327 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Secretoneurin (T-16) is recommended for detection of secretoneurin and secretogranin II 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).

Secretoneurin (T-16) is also recommended for detection of secretoneurin and secretogranin II in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Sg II siRNA (h): sc-39381, Sg II siRNA (m): sc-39382, Sg II shRNA Plasmid (h): sc-39381-SH, Sg II shRNA Plasmid (m): sc-39382-SH, Sg II shRNA (h) Lentiviral Particles: sc-39381-V and Sg II shRNA (m) Lentiviral Particles: sc-39382-V.

Molecular Weight of Sg II precursor: 71 kDa.

Molecular Weight of Secretoneurin: 4 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™ 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.