SANTA CRUZ BIOTECHNOLOGY, INC.

Sg II (M-20): sc-1491

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The Power to Question

BACKGROUND

Chromogranins (secretogranins) are acidic glycoproteins that localize within secretory granules of endocrine, neuroendocrine and neuronal tissue. Family members include chromogranin A (Chr-A); chromogranin B (Chr-B), also known as secretogranin I; chromogranin C (also known as secretogranin II or Sg II); and secretogranin III (Sg III or SCG3). High levels of Chr-A expression are characteristic of neuroendocrine tumors. Pancreastatin is a peptide derived from Chr-A which inhibits Insulin secretion, exocrine pancreatic secretion and gastric acid secretion. Pancreastatin exists as two forms; the major form is expressed in stomach and colon extracts. In neuroendocrine cells the level Sg II has been shown to increase four-fold in response to histamine, while levels of Chr-A and Chr-B showed little or no increase. Sg III is an acidic secretory protein expressed in neuronal and endocrine cells. In the anterior lobe of the rat pituitary gland, Sg III is present in mammotropes and thyrotropes, moderately in gonadotropes and corticotropes, though not in somatotropes. Sg III and carboxypeptidase E (CPE) bind specifically to cholesterol-rich secretory granule (SG) membranes.

REFERENCES

1. 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.
2. Robberecht, P., et al. 1993. Current status on chromogranin A and pancreastatin. Acta Gastroenterol. Belg. 56: 261-263.
3. Schmid, K.W., et al. 1993. Chromogranin A, secretogranin II and vasoactive intestinal peptide in phaeochromocytomas and ganglioneuromas. Histopathology 22: 527-533.

CHROMOSOMAL LOCATION

Genetic locus: Scg2 (mouse) mapping to 1 C4.

SOURCE

Sg II (M-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Sg II of mouse 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-1491 P, (100 µg 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.]

RESEARCH USE

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

APPLICATIONS

Sg II (M-20) is recommended for detection of secretogranin II of mouse and rat 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).

Sg II (M-20) is also recommended for detection of secretogranin II in additional species, including equine, canine, bovine and porcine.

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

Molecuar Weight of Sg II: 63 kDa.

Positive Controls: rat heart extract: sc-2393.

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.

SELECT PRODUCT CITATIONS

1. Huttunen, H.J., et al. 2002. Receptor for advanced glycation end products (RAGE) signaling induces CREB-dependent chromogranin expression during neuronal differentiation. J. Biol. Chem. 277: 38635-38646.
2. Martin, J.N., et al. 2009. Transcriptional and proteomic profiling in a cellular model of DYT1 dystonia. Neuroscience 164: 563-572.
3. García-Escudero, V., et al. 2009. Prevention of senescence progression in reversibly immortalized human ensheathing glia permits their survival after deimmortalization. Mol. Ther. 18: 394-403.
4. García-Escudero, V., et al. 2010. A neuroregenerative human ensheathing glia cell line with conditional rapid growth. Cell Transplant. 20: 153-166.
5. García-Escudero, V., et al. 2012. Patient-derived olfactory mucosa cells but not lung or skin fibroblasts mediate axonal regeneration of retinal ganglion neurons. Neurosci. Lett. 509: 27-32.