

Sg II (SGII 9G3/3): sc-53441

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

- 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.
- Robberecht, P., et al. 1993. Current status on chromogranin A and pancreastatin. *Acta Gastroenterol. Belg.* 56: 261-263.
- Schmid, K.W., et al. 1993. Chromogranin A, secretogranin II and vasoactive intestinal peptide in phaeochromocytomas and ganglioneuromas. *Histopathology* 22: 527-533.
- Bauer, J.W., et al. 1993. Histamine induces a gene-specific synthesis regulation of secretogranin II but not of chromogranin A and B in chromaffin cells in a calcium-dependent manner. *J. Biol. Chem.* 268: 1586-1589.
- Schmid, K.W., et al. 1994. Immunohistochemical demonstration of chromogranin A, chromogranin B, and secretogranin II in extra-adrenal paragangliomas. *Mod. Pathol.* 7: 347-353.

SOURCE

Sg II (SGII 9G3/3) is a mouse monoclonal antibody raised against a synthetic peptide of rat origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Sg II (SGII 9G3/3) is available conjugated to agarose (sc-53441 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53441 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53441 PE), fluorescein (sc-53441 FITC), Alexa Fluor® 488 (sc-53441 AF488), Alexa Fluor® 546 (sc-53441 AF546), Alexa Fluor® 594 (sc-53441 AF594) or Alexa Fluor® 647 (sc-53441 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-53441 AF680) or Alexa Fluor® 790 (sc-53441 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Sg II (SGII 9G3/3) 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), 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) and flow cytometry (1 µg per 1 x 10⁶ cells).

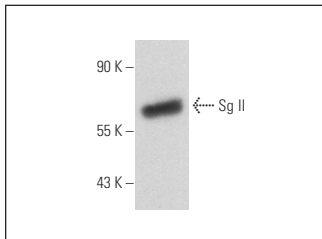
Molecular Weight of Sg II: 63 kDa.

Positive Controls: rat heart extract: sc-2393.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Sg II (SGII 9G3/3): sc-53441. Western blot analysis of Sg II expression in rat heart tissue extract.

SELECT PRODUCT CITATIONS

- Carrel, D., et al. 2009. NOS1AP regulates dendrite patterning of hippocampal neurons through a carboxypeptidase E-mediated pathway. *J. Neurosci.* 29: 8248-8258.
- Mir, S.A., et al. 2018. Mice overexpressing chromogranin A display hypergranulogenic adrenal glands with attenuated ATP levels contributing to the hypertensive phenotype. *J. Hypertens.* 36: 1115-1128.

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 for detailed protocols and support products.