

# Chr-A (E-5): sc-271738

## 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), secretogranin III (Sg III or SCG3). High levels of Chr-A expression is a 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 of 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 primarily expressed in mammotropes and thyrotropes, moderately expressed in gonadotropes and corticotropes, and not detected 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 pheochromocytomas 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.
- Stridsberg, M., et al. 1995. Measurements of chromogranin A, chromogranin B (secretogranin I), chromogranin C (secretogranin II) and pancreastatin in plasma and urine from patients with carcinoid tumours and endocrine pancreatic tumours. *J. Endocrinol.* 144: 49-59.

## CHROMOSOMAL LOCATION

Genetic locus: CHGA (human) mapping to 14q32.12.

## SOURCE

Chr-A (E-5) is a mouse monoclonal antibody raised against amino acids 158-457 of Chr-A of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

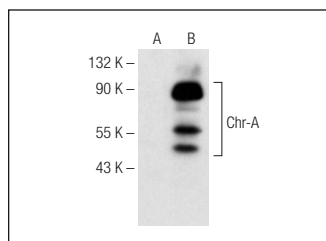
Chr-A (E-5) is recommended for detection of Chr-A of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (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 Chr-A siRNA (h): sc-37212, Chr-A shRNA Plasmid (h): sc-37212-SH and Chr-A shRNA (h) Lentiviral Particles: sc-37212-V.

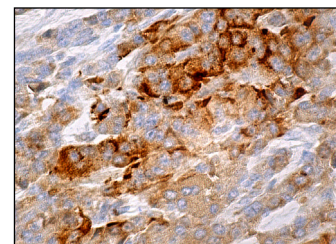
Molecular Weight of Chr-A: 68-80 kDa.

Positive Controls: Chr-A (h): 293T Lysate: sc-159285, DU 145 cell lysate: sc-2268 or Hep G2 cell lysate: sc-2227.

## DATA



Chr-A (E-5): sc-271738. Western blot analysis of Chr-A expression in non-transfected: sc-117752 (A) and human Chr-A transfected: sc-159285 (B) 293T whole cell lysates.



Chr-A (E-5): sc-271738. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of Islets of Langerhans and glandular cells.

## SELECT PRODUCT CITATIONS

- Rozek, W., et al. 2013. Mass spectrometry identification of granins and other proteins secreted by neuroblastoma cells. *Tumour Biol.* 34: 1773-1781.
- Jung, P., et al. 2015. Isolation of human colon stem cells using surface expression of PTK7. *Stem Cell Reports* 5: 979-987.

## 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.



See **Chr-A (C-12): sc-393941** for Chr-A antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.