SANTA CRUZ BIOTECHNOLOGY, INC.

Chr-A (C-12): sc-393941

SANTA CRUZ BIOTECHNOLOGY

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), 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 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.

CHROMOSOMAL LOCATION

Genetic locus: CHGA (human) mapping to 14q32.12; Chga (mouse) mapping to 12 E.

SOURCE

Chr-A (C-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 442-457 at the C-terminus of Chr-A of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Chr-A (C-12) is available conjugated to agarose (sc-393941 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-393941 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393941 PE), fluorescein (sc-393941 FITC), Alexa Fluor® 488 (sc-393941 AF488), Alexa Fluor® 546 (sc-393941 AF546), Alexa Fluor® 594 (sc-393941 AF594) or Alexa Fluor® 647 (sc-393941 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393941 AF680) or Alexa Fluor® 790 (sc-393941 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393941 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

APPLICATIONS

Chr-A (C-12) is recommended for detection of Chr-A and Chr-A derived peptides ER-37 and GR-44 of mouse, rat and 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).

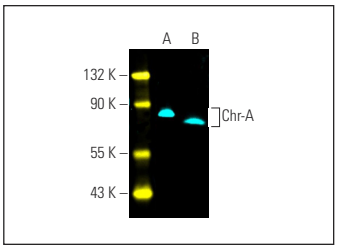
Chr-A (C-12) is also recommended for detection of Chr-A and Chr-A derived peptides ER-37 and GR-44 in additional species, including equine.

Suitable for use as control antibody for Chr-A siRNA (h): sc-37212, Chr-A siRNA (m): sc-37213, Chr-A shRNA Plasmid (h): sc-37212-SH, Chr-A shRNA Plasmid (m): sc-37213-SH, Chr-A shRNA (h) Lentiviral Particles: sc-37212-V and Chr-A shRNA (m) Lentiviral Particles: sc-37213-V.

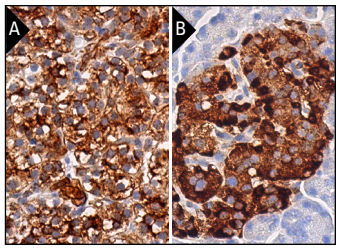
Molecular Weight of Chr-A: 68-80 kDa.

Positive Controls: mouse adrenal gland extract: sc-364237 or SH-SY5Y cell lysate: sc-3812.

DATA



Chr-A (C-12) Alexa Fluor® 647: sc-393941 AF647. Direct fluorescent western blot analysis of Chr-A expression in mouse adrenal gland tissue extract (**A**) and SH-SY5Y whole cell lysate (**B**). Blocked with UltraCruz® Blocking Reagent: sc-516214. Cruz Marker™ Molecular Weight Standards detected with Cruz Marker MW Tag-Alexa Fluor® 488: sc-516790.



Chr-A (C-12): sc-393941. Immunoperoxidase staining of formalin fixed, paraffin-embedded human parathyroid gland tissue showing cytoplasmic staining of glandular cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of Islets of Langerhans (**B**).

SELECT PRODUCT CITATIONS

1. Hinckelmann, M.V., et al. 2016. Self-propelling vesicles define glycolysis as the minimal energy machinery for neuronal transport. Nat. Commun. 7: 13233.
2. Fenderico, N., et al. 2019. Anti-LRP5/6 VHHs promote differentiation of Wnt-hypersensitive intestinal stem cells. Nat. Commun. 10: 365.
3. Li, X., et al. 2020. Clinicopathological characteristics and genetic analysis of pulmonary carcinoid tumors: a single-center retrospective cohort study and literature review. Oncol. Lett. 19: 2446-2456.
4. Singh, P., et al. 2021. Pancreastatin mediated regulation of UCP-1 and energy expenditure in high fructose fed perimenopausal rats. Life Sci. 279: 119677.

RESEARCH USE

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