

Somatostatin (G-10): sc-55565

BACKGROUND

Somatostatin is a regulatory hormone that is expressed throughout the body and inhibits the release of numerous secondary hormones by binding to high-affinity G protein-coupled Somatostatin receptors. This cyclic tetradecapeptide inhibits the secretion of many important hormones, including somatotropin (also designated growth hormone, or GH), Insulin and glucagon. Somatostatin is found in both the hypothalamus and pancreas. Somatostatin is thought to be involved in the regulation of Insulin synthesis. The hormone Somatostatin has active 14 amino acid and 28 amino acid forms that are produced by alternate cleavage of the single preproprotein encoded by this gene. In the cerebellum, Somatostatin-14 and Somatostatin-28 are highly expressed at birth and in the adult stage, respectively. Somatostatin affects rates of neurotransmission in the central nervous system and proliferation of both normal and tumorigenic cells. The gene encoding Somatostatin maps to human chromosome 3q27.3.

CHROMOSOMAL LOCATION

Genetic locus: SST (human) mapping to 3q27.3.

SOURCE

Somatostatin (G-10) is a mouse monoclonal antibody raised against amino acids 1-106 of Somatostatin of human 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.

Somatostatin (G-10) is available conjugated to agarose (sc-55565 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-55565 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-55565 PE), fluorescein (sc-55565 FITC), Alexa Fluor® 488 (sc-55565 AF488), Alexa Fluor® 546 (sc-55565 AF546), Alexa Fluor® 594 (sc-55565 AF594) or Alexa Fluor® 647 (sc-55565 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-55565 AF680) or Alexa Fluor® 790 (sc-55565 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, Somatostatin (G-10) is available conjugated to Alexa Fluor® 405 (sc-55565 AF405, 200 µg/ml), for IF, IHC(P) and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

Somatostatin (G-10) is recommended for detection of Somatostatin of human origin by Western Blotting (starting dilution 1:500, dilution range 1:500-1:1000), 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).

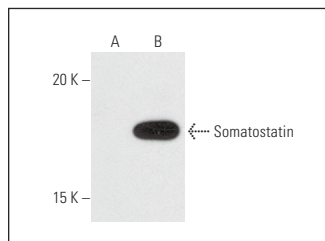
Suitable for use as control antibody for Somatostatin siRNA (h): sc-39728, Somatostatin shRNA Plasmid (h): sc-39728-SH and Somatostatin shRNA (h) Lentiviral Particles: sc-39728-V.

Molecular Weight of Somatostatin: 17 kDa.

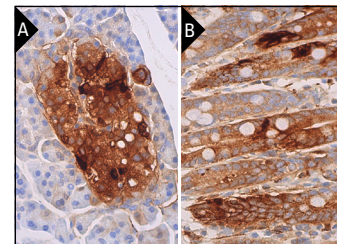
STORAGE

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

DATA



Somatostatin (G-10): sc-55565. Western blot analysis of human Somatostatin expression in non-transfected: sc-117750 (A) and human Somatostatin transfected: sc-110012 (B) CHO whole cell lysates.



Somatostatin (G-10): sc-55565. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of Islets of Langerhans (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic staining of glandular cells and enteroendocrine cells (B).

SELECT PRODUCT CITATIONS

1. Takemi, S., et al. 2016. Molecular cloning of ghrelin and characteristics of ghrelin-producing cells in the gastrointestinal tract of the common marmoset (*Callithrix jacchus*). *Zoolog. Sci.* 33: 497-504.
2. Guo, N., et al. 2018. Dentate granule cell recruitment of feedforward inhibition governs engram maintenance and remote memory generalization. *Nat. Med.* 24: 438-449.
3. Rosado-Olivieri, E.A., et al. 2019. YAP inhibition enhances the differentiation of functional stem cell-derived Insulin-producing β cells. *Nat. Commun.* 10: 1464.
4. Westermeier, F., et al. 2020. Cytosolic phosphoenolpyruvate carboxykinase is expressed in α -cells from human and murine pancreas. *J. Cell. Physiol.* 235: 166-175.
5. Wu, C.T., et al. 2021. SARS-CoV-2 infects human pancreatic β cells and elicits β cell impairment. *Cell Metab.* 33: 1565-1576.e5.
6. Seizer, L., et al. 2022. Expression of toll like receptor 8 (TLR8) in specific groups of mouse hippocampal interneurons. *PLoS ONE* 17: e0267860.
7. Wang, T., et al. 2023. Thyroid hormone transporters MCT8 and OATP1C1 are expressed in projection neurons and interneurons of basal ganglia and motor thalamus in the adult human and macaque brains. *Int. J. Mol. Sci.* 24: 9643.
8. Paterno, R., et al. 2024. Host brain environmental influences on transplanted medial ganglionic eminence progenitors. *Sci. Rep.* 14: 3610.
9. Graff, S.M., et al. 2024. TALK-1-mediated alterations of β -cell mitochondrial function and insulin secretion impair glucose homeostasis on a diabetogenic diet. *Cell Rep.* 43: 113673.

RESEARCH USE

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