

Somatostatin (D-12): sc-25262

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 (D-12) is a mouse monoclonal antibody raised against amino acids 1-106 of Somatostatin of human origin.

PRODUCT

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

Somatostatin (D-12) is available conjugated to agarose (sc-25262 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-25262 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-25262 PE), fluorescein (sc-25262 FITC), Alexa Fluor® 488 (sc-25262 AF488), Alexa Fluor® 546 (sc-25262 AF546), Alexa Fluor® 594 (sc-25262 AF594) or Alexa Fluor® 647 (sc-25262 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-25262 AF680) or Alexa Fluor® 790 (sc-25262 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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

APPLICATIONS

Somatostatin (D-12) is recommended for detection of Somatostatin 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) 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.

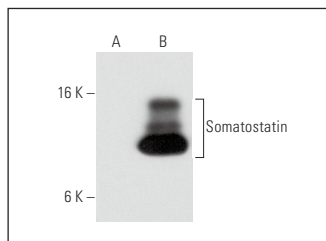
Molecular Weight of Somatostatin: 17 kDa.

Positive Controls: TT whole cell lysate: sc-364195, H4 cell lysate: sc-2408 or Somatostatin (h): 293 Lysate: sc-110762.

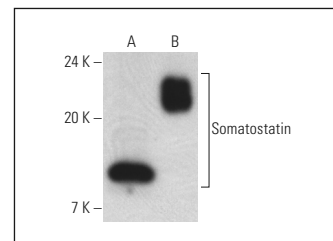
STORAGE

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

DATA



Somatostatin (D-12): sc-25262. Western blot analysis of Somatostatin expression in non-transfected: sc-110760 (A) and human Somatostatin transfected: sc-110762 (B) 293 whole cell lysates.



Somatostatin (D-12): sc-25262. Western blot analysis of Somatostatin expression in TT whole cell lysate (A) and human recombinant Somatostatin (B). Detection reagent used: m-IgG Fc BP-HRP: sc-525409.

SELECT PRODUCT CITATIONS

- Hong, F., et al. 2014. New perspectives of vesicular monoamine transporter 2 chemical characteristics in mammals and its constant expression in type 1 diabetes rat models. *Transl. Res.* 163: 171-182.
- Ruipan, Z., et al. 2014. Differential expression and localization of neuropeptide Y peptide in pancreatic islet of diabetic and high fat fed rats. *Peptides* 54: 33-38.
- Chen, Y., et al. 2014. Distinctive expression and cellular distribution of dopamine receptors in the pancreatic islets of rats. *Cell Tissue Res.* 357: 597-606.
- Sego, C., et al. 2014. Lateral habenula and the rostromedial tegmental nucleus innervate neurochemically distinct subdivisions of the dorsal raphe nucleus in the rat. *J. Comp. Neurol.* 522: 1454-1484.
- Zhang, Y., et al. 2015. Pancreatic endocrine effects of dopamine receptors in human islet cells. *Pancreas* 44: 925-929.
- Beamish, C.A., et al. 2016. Insulin-positive, Glut2-low cells present within mouse pancreas exhibit lineage plasticity and are enriched within extra-islet endocrine cell clusters. *Islets* 8: 65-82.
- Rattanansruang, P., et al. 2018. Establishment of Insulin-producing cells from human embryonic stem cells under hypoxic condition for cell based therapy. *Front. Cell Dev. Biol.* 6: 49.
- Guida, C., et al. 2018. Sitagliptin and Roux-en-Y gastric bypass modulate Insulin secretion via regulation of intra-islet PYY. *Diabetes Obes. Metab.* 20: 571-581.

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.