

Somatostatin (H-11): sc-74556

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.

REFERENCES

1. Zabel, B.U., et al. 1983. High-resolution chromosomal localization of human genes for amylase, proopiomelanocortin, Somatostatin, and a DNA fragment (D3S1) by *in situ* hybridization. *Proc. Natl. Acad. Sci. USA* 80: 6932-6936.
2. Shen, L.P., et al. 1984. Sequence of the human Somatostatin I gene. *Science* 224: 168-171.

CHROMOSOMAL LOCATION

Genetic locus: SST (human) mapping to 3q27.3; Sst (mouse) mapping to 16 B1.

SOURCE

Somatostatin (H-11) is a mouse monoclonal antibody raised against amino acids 25-116 of Somatostatin of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Somatostatin (H-11) is available conjugated to agarose (sc-74556 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-74556 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-74556 PE), fluorescein (sc-74556 FITC), Alexa Fluor® 488 (sc-74556 AF488), Alexa Fluor® 546 (sc-74556 AF546), Alexa Fluor® 594 (sc-74556 AF594) or Alexa Fluor® 647 (sc-74556 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-74556 AF680) or Alexa Fluor® 790 (sc-74556 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, Somatostatin (H-11) is available conjugated to biotin (sc-74556 B), 200 µg/ml, for WB, IHC(P) and ELISA.

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STORAGE

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

APPLICATIONS

Somatostatin (H-11) is recommended for detection of Somatostatin 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).

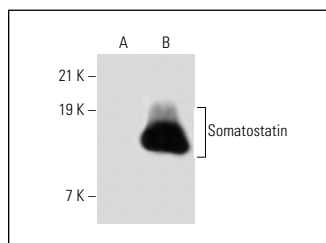
Somatostatin (H-11) is also recommended for detection of Somatostatin in additional species, including equine, bovine, porcine and canine.

Suitable for use as control antibody for Somatostatin siRNA (h): sc-39728, Somatostatin siRNA (m): sc-39729, Somatostatin shRNA Plasmid (h): sc-39728-SH, Somatostatin shRNA Plasmid (m): sc-39729-SH, Somatostatin shRNA (h) Lentiviral Particles: sc-39728-V and Somatostatin shRNA (m) Lentiviral Particles: sc-39729-V.

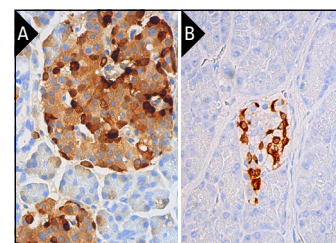
Molecular Weight of Somatostatin: 17 kDa.

Positive Controls: H4 cell lysate: sc-2408 or human Somatostatin transfected 293 whole cell lysate.

DATA



Somatostatin (H-11): sc-74556. Western blot analysis of Somatostatin expression in non-transfected (A) and human Somatostatin transfected (B) 293 whole cell lysates.



Somatostatin (H-11): sc-74556. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of islets of Langerhans (A). Somatostatin (H-11) HRP: sc-74556 HRP. Direct immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of islets of Langerhans. Blocked with 0.25X UltraCruz® Blocking Reagent: sc-516214 (B).

SELECT PRODUCT CITATIONS

1. Radojevic, V., et al. 2011. The somatostatinergetic system in the mammalian cochlea. *BMC Neurosci.* 12: 89.
2. Shigemori, K., et al. 2022. Peripheral Aβ acts as a negative modulator of Insulin secretion. *Proc. Natl. Acad. Sci. USA* 119: e2117723119.
3. Ding, L., et al. 2023. Zhx2 maintains islet β-cell mass and function by transcriptionally regulating Pax6. *iScience* 26: 106871.
4. Wang, W., et al. 2024. DCX knockout ferret reveals a neurogenic mechanism in cortical development. *Cell Rep.* 43: 114508.

RESEARCH USE

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