

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 neuro-transmission 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; 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.

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.

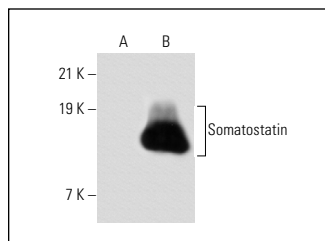
Suitable for use as control antibody for Somatostatin siRNA (h): sc-39728, Somatostatin siRNA (m): sc-39729, Somatostatin shRNA Plasmid (h): sc-39728-SH, Somatostatin shRNA Plasmid (m): sc-39729-SH, Somatostatin shRNA (h) Lentiviral Particles: sc-39728-V and Somatostatin shRNA (m) Lentiviral Particles: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

Molecular Weight of Somatostatin: 17 kDa.

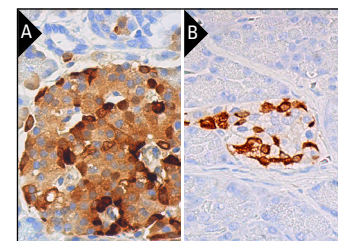
STORAGE

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

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

- Radojevic, V., et al. 2011. The somatostatinergic system in the mammalian cochlea. *BMC Neurosci.* 12: 89.
- Zou, S. and Kumar, U. 2015. Colocalization of cannabinoid receptor 1 with Somatostatin and neuronal nitric oxide synthase in rat brain hippocampus. *Brain Res.* 1622: 114-126.
- Saxena, P., et al. 2016. A programmable synthetic lineage-control network that differentiates human iPSCs into glucose-sensitive Insulin-secreting β -like cells. *Nat. Commun.* 7: 11247.
- Yang, J.J., et al. 2017. KATP channels mediate differential metabolic responses to glucose shortage of the dorsomedial and ventrolateral oscillators in the central clock. *Sci. Rep.* 7: 640.
- Lee, H., et al. 2020. β cell dedifferentiation induced by IRE1 α deletion prevents type 1 diabetes. *Cell Metab.* 31: 822-836.e5.
- Kement, D., et al. 2021. Neuroserpin is strongly expressed in the developing and adult mouse neocortex but its absence does not perturb cortical lamination and synaptic proteome. *Front. Neuroanat.* 15: 627896.
- Cai, S., et al. 2021. Effect of basal forebrain Somatostatin and parvalbumin neurons in propofol and isoflurane anesthesia. *CNS Neurosci. Ther.* E-published.
- de Barros Pimentel Villaça, C., et al. 2021. Beneficial effects of physical exercise for β -cell maintenance in a type 1 diabetes mellitus animal model. *Exp. Physiol.* E-published.

RESEARCH USE

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

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