

Somatostatin (h): 293 Lysate: sc-110762

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., Naylor, S.L., Sakaguchi, A.Y., Bell, G.I. and Shows, T.B. 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. Warren, T.G. and Shields, D. 1984. Cell-free biosynthesis of multiple pre-somatostatins: characterization by hybrid selection and amino-terminal sequencing. *Biochemistry* 23: 2684-2690.
3. Shen, L.P. and Rutter, W.J. 1984. Sequence of the human Somatostatin I gene. *Science* 224: 168-171.
4. Lamberts, S.W., Krenning, E.P., Klijn, J.G. and Reubi, J.C. 1990. The clinical use of Somatostatin analogues in the treatment of cancer. *Baillieres Clin. Endocrinol. Metab.* 4: 29-49.
5. Tsuzaki, S. and Moses, A.C. 1990. Somatostatin inhibits deoxyribonucleic acid synthesis induced by both thyrotropin and Insulin-like growth factor-I in FRTL5 cells. *Endocrinology* 126: 3131-3138.
6. Fehmann, H.D., Jehle, P., Markus, U. and Goke, B. 1996. Functional active receptors for Insulin-like growth factors-I (IGF-I) and IGF-II on Insulin-, glucagon-, and Somatostatin-producing cells. *Metabolism* 45: 759-766.
7. Minami, S., Kamegai, J., Sugihara, H., Suzuki, N. and Wakabayashi, I. 1998. Growth hormone inhibits its own secretion by acting on the hypothalamus through its receptors on neuropeptide Y neurons in the arcuate nucleus and Somatostatin neurons in the periventricular neuleus. *Endocr. J.* 45 Suppl: S19-S26.
8. Masmoudi, O., Gandolfo, P., Tokay, T., Leprince, J., Ravni, A., Vaudry, H. and Tonon, M.C. 2005. Somatostatin downregulates the expression and release of endozepines from cultured rat astrocytes via distinct receptor subtypes. *J. Neurochem.* 94: 561-571.
9. Wenthe, W., Stroh, T., Beaudet, A., Richter, D. and Kreienkamp, H.J. 2005. Interactions with PDZ domain proteins PIST/GOPC and PDZK1 regulate intracellular sorting of the Somatostatin receptor subtype 5. *J. Biol. Chem.* 280: 32419-32425.

CHROMOSOMAL LOCATION

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

PRODUCT

Somatostatin (h): 293 Lysate represents a lysate of human Somatostatin transfected 293 cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

Somatostatin (h): 293 Lysate is suitable as a Western Blotting positive control for human reactive Somatostatin antibodies. Recommended use: 10-20 µl per lane.

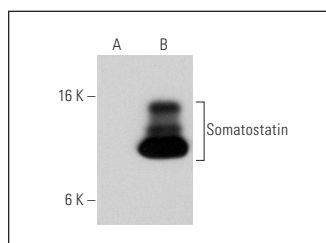
Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

Somatostatin (D-12): sc-25262 is recommended as a positive control antibody for Western Blot analysis of enhanced human Somatostatin expression in Somatostatin transfected 293 cells (starting dilution 1:100, dilution range 1:100-1:1,000).

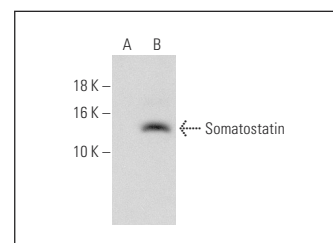
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

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 (G-10): sc-55565. Western blot analysis of Somatostatin expression in non-transfected: sc-110760 (A) and human Somatostatin transfected: sc-110762 (B) 293 whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

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.