

# SSTR1 (1F7): sc-293490

## BACKGROUND

SSTRs (for somatostatin receptors) represent a family of G-protein-coupled receptors which mediate the diverse biological actions of somatostatin (SST). There are five distinct subtypes of SSTRs that bind two natural ligands, SST-14 and SST-28. SSTR2 gives rise to spliced variants, SSTR2A and 2B. SSTRs share common signaling pathways such as the ability to inhibit adenylyl cyclase via GTP binding proteins. Some of the subtypes are also coupled to tyrosine phosphatase (SSTR1,2), Ca<sup>2+</sup> channels (SSTR2), Na<sup>+</sup>/H<sup>+</sup> exchanger (SSTR1), PLA-2 (SSTR4), and MAP kinase (SSTR4). Individual target cells typically express more than one SSTR subtype and often all five isoforms. Subtypes of SSTR can form functional homo- and heterodimers.

## REFERENCES

- Patel, Y.C., Panetta, R., Escher, E., Greenwood, M. and Srikant, C.B. 1994. Expression of multiple somatostatin receptor genes in AtT-20 cells. Evidence for a novel somatostatin-28 selective receptor subtype. *J. Biol. Chem.* 269: 1506-1509.
- Reardon, D.B., Dent, P., Wood, S.L., Kong, T. and Sturgill, T.W. 1997. Activation *in vitro* of somatostatin receptor subtypes 2, 3, or 4 stimulates protein tyrosine phosphatase activity in membranes from transfected Ras-transformed NIH 3T3 cells: coexpression with catalytically inactive SHP-2 blocks responsiveness. *Mol. Endocrinol.* 11: 1062-1069.
- Patel, Y.C. 1999. Somatostatin and its receptor family. *Front. Neuroendocrinol.* 20: 157-198.
- Sharma, K., Patel, Y.C. and Srikant, C.B. 1999. C-terminal region of human somatostatin receptor 5 is required for induction of Rb and G<sub>1</sub> cell cycle arrest. *Mol. Endocrinol.* 13: 82-90.
- Kumar, U., Sasi, R., Suresh, S., Patel, A., Thangaraju, M., Metrakos, P., Patel, S.C. and Patel, Y.C. 1999. Subtype-selective expression of the five somatostatin receptors (hSSTR1-5) in human pancreatic islet cells: a quantitative double-label immuno-histochemical analysis. *Diabetes* 48: 77-85.
- Rocheville, M., Lange, D.C., Kumar, U., Sasi, R., Patel, R.C. and Patel, Y.C. 2000. Subtypes of the somatostatin receptor assemble as functional homo- and heterodimers. *J. Biol. Chem.* 275: 7862-7869.
- Rocheville, M., Lange, D.C., Kumar, U., Patel, S.C., Patel, R.C. and Patel, Y.C. 2000. Receptors for dopamine and somatostatin: formation of hetero-oligomers with enhanced functional activity. *Science* 288: 154-157.

## CHROMOSOMAL LOCATION

Genetic locus: SSTR1 (human) mapping to 14q21.1.

## SOURCE

SSTR1 (1F7) is a mouse monoclonal antibody raised against amino acids 1-60 representing partial length SSTR1 of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

SSTR1 (1F7) is recommended for detection of SSTR1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

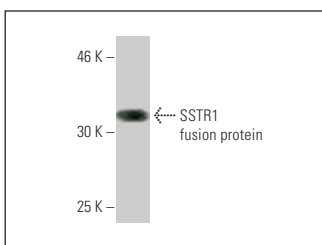
Suitable for use as control antibody for SSTR1 siRNA (h): sc-42267, SSTR1 shRNA Plasmid (h): sc-42267-SH and SSTR1 shRNA (h) Lentiviral Particles: sc-42267-V.

Molecular Weight of SSTR1: 65 kDa.

## 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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

## DATA



SSTR1 (1F7): sc-293490. Western blot analysis of human recombinant SSTR1 fusion protein.

## SELECT PRODUCT CITATIONS

- Li, Z., Jiang, X., Chen, P., Wu, X., Duan, A. and Qin, Y. 2018. Combined effects of octreotide and cisplatin on the proliferation of side population cells from anaplastic thyroid cancer cell lines. *Oncol. Lett.* 16: 4033-4042.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. 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](http://www.scbt.com) for detailed protocols and support products.