

# SSTR4 (H-50): sc-25678

## 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., et al. 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., et al. 1997. Activation 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., et al. 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., et al. 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., et al. 2000. Subtypes of the somatostatin receptor assemble as functional homo- and heterodimers. *J. Biol. Chem.* 275: 7862-7869.
- Rocheville, M., et al. 2000. Receptors for dopamine and somatostatin: formation of hetero-oligomers with enhanced functional activity. *Science* 288: 154-157.

## CHROMOSOMAL LOCATION

Genetic locus: SSTR4 (human) mapping to 20p11.21; Sstr4 (mouse) mapping to 2 G3.

## SOURCE

SSTR4 (H-50) is a rabbit polyclonal antibody raised against amino acids 171-220 of SSTR4 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

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

## APPLICATIONS

SSTR4 (H-50) is recommended for detection of SSTR4 of mouse, rat and 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)], 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).

SSTR4 (H-50) is also recommended for detection of SSTR4 in additional species, including porcine.

Suitable for use as control antibody for SSTR4 siRNA (h): sc-42275, SSTR4 siRNA (m): sc-42276, SSTR4 shRNA Plasmid (h): sc-42275-SH, SSTR4 shRNA Plasmid (m): sc-42276-SH, SSTR4 shRNA (h) Lentiviral Particles: sc-42275-V and SSTR4 shRNA (m) Lentiviral Particles: sc-42276-V.

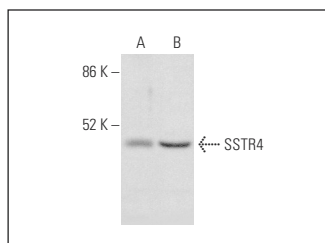
Molecular Weight of SSTR4: 42 kDa.

Positive Controls: rat brain extract: sc-2392 or NIH/3T3 whole cell lysate: sc-2210.

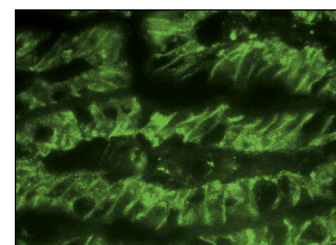
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



SSTR4 (H-50): sc-25678. Western blot analysis of SSTR4 expression in rat brain tissue extract (A) and NIH/3T3 whole cell lysate (B).



SSTR4 (H-50): sc-25678. Immunofluorescence staining of normal mouse intestine frozen section showing membrane staining.

## SELECT PRODUCT CITATIONS

- Ruscica, M., et al. 2009. Regulation of prostate cancer cell proliferation by somatostatin receptor activation. *Mol. Cell. Endocrinol.* 315: 254-262.

## RESEARCH USE

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