

SSTR4 (C-15): sc-11619

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), Ca²⁺ channels (SSTR2), Na⁺/H⁺ 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

1. 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.
2. Reardon, D.B., et al. 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.

CHROMOSOMAL LOCATION

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

SOURCE

SSTR4 (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus 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.

Blocking peptide available for competition studies, sc-11619 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SSTR4 (C-15) 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), 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).

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.

SELECT PRODUCT CITATIONS

1. Aguado-Llera, D., et al. 2005. Protective effects of Insulin-like growth factor-I on the somatostatinergetic system in the temporal cortex of β-amyloid-treated rats. *J. Neurochem.* 92: 607-615.
2. Hernández-Pinto, A.M., et al. 2006. A vitamin A-free diet results in impairment of the rat hippocampal somatostatinergetic system. *Neuroscience* 141: 851-861.
3. Batista, D.L., et al. 2006. The effects of SOM230 on cell proliferation and adrenocorticotropin secretion in human corticotroph pituitary adenomas. *J. Clin. Endocrinol. Metab.* 91: 4482-4488.
4. Aguado-Llera, D., et al. 2007. Alteration of the somatostatinergetic system in the striatum of rats with acute experimental autoimmune encephalomyelitis. *Neuroscience* 148: 238-249.
5. Aguado-Llera, D., et al. 2007. 17β-estradiol protects depletion of rat temporal cortex somatostatinergetic system by β-amyloid. *Neurobiol. Aging* 28: 1396-1409.
6. Burgos-Ramos, E., et al. 2007. Chronic but not acute intracerebroventricular administration of amyloid β-peptide(25-35) decreases somatostatin content, adenylyl cyclase activity, somatostatin-induced inhibition of adenylyl cyclase activity, and adenylyl cyclase I levels in the rat hippocampus. *J. Neurosci. Res.* 85: 433-442.
7. Burgos-Ramos, E., et al. 2008. Minocycline provides protection against β-amyloid(25-35)-induced alterations of the somatostatin signaling pathway in the rat temporal cortex. *Neuroscience* 154: 1458-1466.
8. Minsel, I., et al. 2009. Somatostatin actions via somatostatin receptors on the ocular surface are modulated by inflammatory processes. *Endocrinology* 150: 2254-2263.
9. Burgos-Ramos, E., et al. 2009. Sulfadiazine partially protects the rat temporal cortex from amyloid β peptide (25-35)-induced alterations of the somatostatinergetic system. *Neuroendocrinology* 89: 400-410.
10. Saowakon, N., et al. 2009. *Fasciola gigantica*: anthelmintic effect of the aqueous extract of *Artocarpus lakoocha*. *Exp. Parasitol.* 122: 289-298.
11. Aguado-Llera, D., et al. 2010. Role of ethanolamine phosphate in the hippocampus of rats with acute experimental autoimmune encephalomyelitis. *Neurochem. Int.* 58: 22-34.

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 or our catalog for detailed protocols and support products.