SANTA CRUZ BIOTECHNOLOGY, INC.

SSTR5 (C-15): sc-11623

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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^{2+} 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.
3. Sharma, K., et al. 1999. C-terminal region of human somatostatin receptor 5 is required for induction of Rb and G_1 cell cycle arrest. Mol. Endocrinol. 13: 82-90.
4. 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.
5. 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: SSTR5 (human) mapping to 16p13.3.

SOURCE

SSTR5 (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of SSTR5 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-11623 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

SSTR5 (C-15) is recommended for detection of SSTR5 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)], 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).

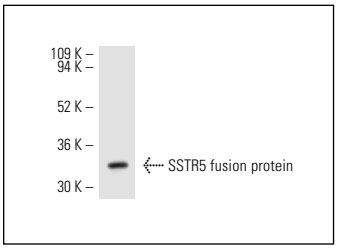
Suitable for use as control antibody for SSTR5 siRNA (h): sc-42277, SSTR5 shRNA Plasmid (h): sc-42277-SH and SSTR5 shRNA (h) Lentiviral Particles: sc-42277-V.

Molecular Weight (predicted) of SSTR5: 39 kDa.

Molecular Weight (observed) of SSTR5: 74 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

DATA



SSTR5 (C-15): sc-11623. Western blot analysis of human recombinant SSTR5 fusion protein.

SELECT PRODUCT CITATIONS

1. 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.
2. Ke, J.B., et al. 2007. Expression of somatostatin receptor subtype 5 in rat retinal amacrine cells. Neuroscience 144: 1025-1032.
3. Minsel, I., et al. 2009. Somatostatin actions via somatostatin receptors on the ocular surface are modulated by inflammatory processes. Endocrinology 150: 2254-2263.
4. Ruscica, M., et al. 2010. Regulation of prostate cancer cell proliferation by somatostatin receptor activation. Mol. Cell. Endocrinol. 315: 254-262. Erratum in 2011 341: 89.

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.