SANTA CRUZ BIOTECHNOLOGY, INC.

SSTR3 (N-19): sc-11610

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

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2. 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.
3. Patel, Y.C. 1999. Somatostatin and its receptor family. Front. Neuroendo-crinol. 20: 157-198.
4. 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_1 cell cycle arrest. Mol. Endocrinol. 13: 82-90.
5. 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 immunohistochemical analysis. Diabetes 48: 77-85.
6. 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.
7. 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: SSTR3 (human) mapping to 22q13.1.

SOURCE

SSTR3 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal extracellular domain of SSTR3 of human origin.

RESEARCH USE

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

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-11610 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SSTR3 (N-19) is recommended for detection of SSTR3 of 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 SSTR3 siRNA (h): sc-42273, SSTR3 shRNA Plasmid (h): sc-42273-SH and SSTR3 shRNA (h) Lentiviral Particles: sc-42273-V.

Molecular Weight of SSTR3: 80/45 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Batista, D.L., Zhang, X., Gejman, R., Ansell, P.J., Zhou, Y., Johnson, S.A., Swearingen, B., Hedley-Whyte, E.T., Stratakis, C.A. and Klibanski, A. 2006. The effects of SOM230 on cell proliferation and adrenocorticotropin secretion in human corticotroph pituitary adenomas. J. Clin. Endocrinol. Metab. 91: 4482-4488.
2. Ruscica, M., Arvigo, M., Gatto, F., Dozio, E., Feltrin, D., Culler, M.D., Minuto, F., Motta, M., Ferone, D. and Magni, P. 2009. Regulation of prostate cancer cell proliferation by somatostatin receptor activation. Mol. Cell. Endocrinol. 315: 254-262.

STORAGE

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