SANTA CRUZ BIOTECHNOLOGY, INC.

SSTR3 (M-18): sc-11617

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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. Patel, Y.C. 1999. Somatostatin and its receptor family. Front. Neuroendocrinol. 20: 157-198.

CHROMOSOMAL LOCATION

Genetic locus:Sstr3 (mouse) mapping to 15 E1.

SOURCE

SSTR3 (M-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of SSTR3 of mouse 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-11617 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SSTR3 (M-18) is recommended for detection of SSTR3 of mouse and rat 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 (m): sc-42274, SSTR3 shRNA Plasmid (m): sc-42274-SH and SSTR3 shRNA (m) Lentiviral Particles: sc-42274-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. Qiu, C.Z., et al. 2006. Relationship between somatostatin receptor subtype expression and clinicopathology, Ki-67, Bcl-2 and p53 in colorectal cancer. World J. Gastroenterol. 12: 2011-2015.
2. Berbari, N.F., et al. 2008. Bardet-Biedl syndrome proteins are required for the localization of G protein-coupled receptors to primary cilia. Proc. Natl. Acad. Sci. USA 105: 4242-4246.
3. Domire, J.S., et al. 2009. Markers for neuronal cilia. Methods Cell Biol. 91: 111-121.
4. Kesterson, R.A., et al. 2009. Utilization of conditional alleles to study the role of the primary cilium in obesity. Methods Cell Biol. 94: 163-179.
5. Jin, H., et al. 2010. The conserved Bardet-Biedl syndrome proteins assemble a coat that traffics membrane proteins to cilia. Cell 141: 1208-1219.
6. Mukhopadhyay, S., et al. 2010. TULP3 bridges the IFT-A complex and membrane phosphoinositides to promote trafficking of G protein-coupled receptors into primary cilia. Genes Dev. 24: 2180-2193.
7. Mukhopadhyay, S., et al. 2013. The ciliary G protein-coupled receptor Gpr161 negatively regulates the Sonic hedgehog pathway via cAMP signaling. Cell 152: 210-223.
8. O'Connor, A.K., et al. 2013. An inducible CiliaGFP mouse model for *in vivo* visualization and analysis of cilia in live tissue. Cilia 2: 8.
9. Heydet, D., et al. 2013. A truncating mutation of Alms1 reduces the number of hypothalamic neuronal cilia in obese mice. Dev. Neurobiol. 73: 1-13.

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.