SANTA CRUZ BIOTECHNOLOGY, INC.

SR-5A (H-57): sc-28960

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

SR-5B, also designated 5-hydroxytryptamine (Serotonin) receptor 5B (5-HT5B) and G protein-coupled receptor 134 (GPR134) is a receptor for the monoamine ligand Serotonin (5-hydroxytryptamine, 5-HT). Serotonin is a neurotransmitter derived from serotonergic neurons in the central nervous system and entrochromaffin cells in the gastrointestinal tract. Serotonin actions are mediated by receptors that influence the biochemistry of depression, anxiety, sexuality and appetite. Rat SR-5B is present in serotonergic neurons in dorsal raphe (DR) and central superior nucleus (CS, median raphe nucleus). DR cell bodies showing SR-5B mRNA expression are abundant in the medial portions of the nucleus. CS coexpression of SR-5B receptor mRNA with Serotonin transporter mRNA is high in the intermediate portions of the nucleus. Serotonin receptors include SR-1–7 (5HT1–7). Subtypes within the SR-1 group include SR-1A, -1B, -1D, -1E and -1F. Subtypes within the SR-2 group include SR-2A, -2B and -2C. Subtypes within the SR-5 group include SR-5A and -5B. SR receptors can couple to G proteins that act on either Adenylate Cyclase or phospholipase C (PLC). The SR-3 class of receptors are ion channels.

REFERENCES

1. Watts, S.W., et al. 1994. Contractile SR-2A signal transduction in guinea pig trachea: importance of protein kinase C and extracellular and intracellular calcium but not phosphoinositide hydrolysis. J. Pharmacol. Exp. Ther. 271: 832-844.
2. Goppelt-Struebe, M., et al. 1998. Signaling pathways mediating induction of the early response genes prostaglandin G/H synthase-2 and Egr-1 by Serotonin via 5-HT2A receptors. J. Cell. Physiol. 175: 341-347.
3. Barnes, N.M., et al. 1999. A review of central 5-HT receptors and their function. Neuropharmacology 38: 1083-1152.
4. Nebigil, C.G., et al. 2000. SR-2B is required for heart development. Proc. Natl. Acad. Sci. USA 97: 9508-9513.
5. Stefulj, J., et al. 2000. mRNA expression of Serotonin receptors in cells of the immune tissues of the rat. Brain Behav. Immun. 14: 219-224.
6. Nicholson, R., et al. 2003. Serotonin receptor mRNA expression in rat dorsal root ganglion neurons. Neurosci. Lett. 337: 119-122.

CHROMOSOMAL LOCATION

Genetic locus: HTR5A (human) mapping to 7q36.1; Htr5a (mouse) mapping to 5 B1.

SOURCE

SR-5A (H-57) is a rabbit polyclonal antibody raised against amino acids 1-57 mapping at the N-terminus of SR-5A 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.

RESEARCH USE

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

APPLICATIONS

SR-5A (H-57) is recommended for detection of SR-5A of human and, to a lesser extent, mouse and rat 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), immunohistochemistry (including paraffin-embedded sections) (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 SR-5A siRNA (h): sc-42241, SR-5A siRNA (m): sc-42242, SR-5A shRNA Plasmid (h): sc-42241-SH, SR-5A shRNA Plasmid (m): sc-42242-SH, SR-5A shRNA (h) Lentiviral Particles: sc-42241-V and SR-5A shRNA (m) Lentiviral Particles: sc-42242-V.

Molecular Weight of non-glycosylated SR-5A: 35-45 kDa.

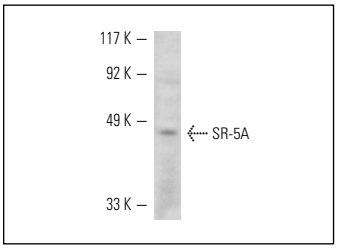
Molecular Weight of glycosylated SR-5A: 45-55 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409.

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



SR-5A (H-57): sc-28960. Western blot analysis of SR-5A expression in IMR-32 whole cell lysate.

SR-5A (H-57): sc-28960. Immunoperoxidase staining of formalin fixed, paraffin-embedded human stomach tissue showing membrane staining of glandular cells at high magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

STORAGE

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