

SR-5A (G-20): sc-26664

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 enterochromaffin 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 serotonin-2A receptor 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-Strube, 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. Serotonin 2B receptor 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.
7. Serrats, J., et al. 2004. 5-HT5B receptor mRNA in the raphe nuclei: coexpression with serotonin transporter. *Synapse* 51: 102-111.

CHROMOSOMAL LOCATIONS

Genetic locus: HTR5A (human) mapping to 7q36.2; Htr5a (mouse) mapping to 5 B1.

SOURCE

SR-5A (G-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SR-5A of human origin.

STORAGE

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

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-26664 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SR-5A (G-20) 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), 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).

SR-5A (G-20) is also recommended for detection of SR-5A in additional species, including equine.

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 SR-5A isoforms 1/2: 35-45/45-55 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 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.

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.