

SR-2B (H-11): sc-376834

BACKGROUND

Serotonin (also designated 5-hydroxytryptamine or 5-HT) is a molecule that functions as a neurotransmitter, a hormone and a mitogen, and it is predominantly expressed in the gut, platelets and central nervous system (CNS). In the CNS, serotonin modulates several processes, including anxiety, sleep, appetite, behavior and drug abuse. In platelets and gut, serotonin plays a major role in cardiovascular function and motility of the gastrointestinal tract, respectively. Serotonin mediates its effects through several of G protein-coupled receptors, designated 5-HT receptors or alternatively SR receptors. The SR-2 receptors are comprised of three subtypes, SR-2A, SR-2B and SR-2C, which activate phospholipase C and release intracellular stores of calcium in response to serotonin. SR-2A has a specific role in tracheal smooth muscle contraction, bronchoconstriction and mediating aldosterone production, and it is also thought to play a role in several psychiatric disorders, including depression and schizophrenia. SR-2B is expressed in embryonic and adult cardiovascular tissues, gut and brain and plays an important role in the pathology of cardiac disorders. SR-2C is thought to mediate the effects of atypical antipsychotic drugs.

REFERENCES

- 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.
- 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-HT_{2A} receptors. *J. Cell. Physiol.* 175: 341-347.
- Nebigil, C.G., et al. 2000. Serotonin 2B receptor is required for heart development. *Proc. Natl. Acad. Sci. USA* 97: 9508-9513.
- Contesse, V., et al. 2000. Role of 5-HT in the regulation of the brain-pituitary-adrenal axis: effects of 5-HT on adrenocortical cells. *Can. J. Physiol. Pharmacol.* 78: 967-983.
- Herrick-Davis, K., et al. 2000. Inverse agonist activity of atypical antipsychotic drugs at human 5-hydroxytryptamine_{2C} receptors. *J. Pharmacol. Exp. Ther.* 295: 226-232.

CHROMOSOMAL LOCATION

Genetic locus: HTR2B (human) mapping to 2q37.1; Htr2b (mouse) mapping to 1 C5.

SOURCE

SR-2B (H-11) is a mouse monoclonal antibody raised against amino acids 387-481 of SR-2B of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain 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-2B (H-11) is recommended for detection of serotonin 2B receptor (5-HT_{2B}) of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

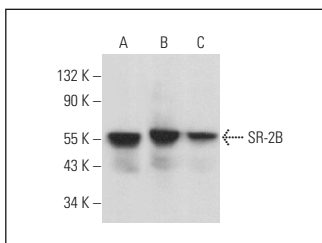
Suitable for use as control antibody for SR-2B siRNA (h): sc-42233, SR-2B siRNA (m): sc-42234, SR-2B shRNA Plasmid (h): sc-42233-SH, SR-2B shRNA Plasmid (m): sc-42234-SH, SR-2B shRNA (h) Lentiviral Particles: sc-42233-V and SR-2B shRNA (m) Lentiviral Particles: sc-42234-V.

Positive Controls: C6 whole cell lysate: sc-364373, EOC 20 whole cell lysate: sc-364187 or 3T3-L1 cell lysate: sc-2243.

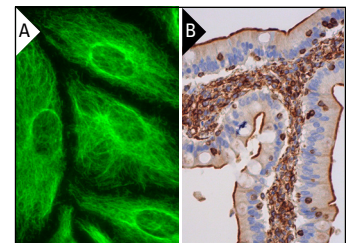
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



SR-2B (H-11): sc-376834. Western blot analysis of SR-2B expression in C6 (A), 3T3-L1 (B) and EOC 20 (C) whole cell lysates.



SR-2B (H-11): sc-376834. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing apical membrane staining of glandular cells and membrane and cytoplasmic staining of interstitial cells (B).

SELECT PRODUCT CITATIONS

- Peters, M.A.M., et al. 2020. Serotonin and Dopamine receptor expression in solid tumours including rare cancers. *Pathol. Oncol. Res.* 26: 1539-1547.

STORAGE

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