

SR-2B (C-6): sc-376878

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

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-HT_{2A} receptors. *J. Cell. Physiol.* 175: 341-347.
3. Nebigil, C.G., et al. 2000. Serotonin 2B receptor is required for heart development. *Proc. Natl. Acad. Sci. USA* 97: 9508-9513.

CHROMOSOMAL LOCATION

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

SOURCE

SR-2B (C-6) is a mouse monoclonal antibody raised against amino acids 387-481 of SR-2B of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SR-2B (C-6) is available conjugated to agarose (sc-376878 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376878 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376878 PE), fluorescein (sc-376878 FITC), Alexa Fluor[®] 488 (sc-376878 AF488), Alexa Fluor[®] 546 (sc-376878 AF546), Alexa Fluor[®] 594 (sc-376878 AF594) or Alexa Fluor[®] 647 (sc-376878 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-376878 AF680) or Alexa Fluor[®] 790 (sc-376878 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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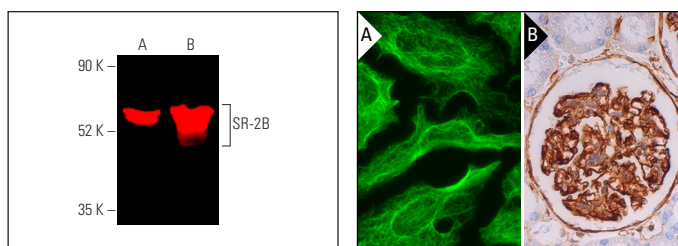
APPLICATIONS

SR-2B (C-6) 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: HeLa whole cell lysate: sc-2200 or SK-MEL-28 cell lysate: sc-2236.

DATA



SR-2B (C-6): sc-376878. Near-Infrared western blot analysis of SR-2B expression in HeLa (A) and SK-MEL-28 (B) whole cell lysates. Blocked with UltraCruz[®] Blocking Reagent: sc-516214. Detection reagent used: m-IgG₁, BP-CFL 790: sc-533666.

SR-2B (C-6): sc-376878. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing membrane staining of cells in glomeruli (B).

SELECT PRODUCT CITATIONS

1. Tian, A., et al. 2017. Edaravone improves spatial memory and modulates endoplasmic reticulum stress-mediated apoptosis after abdominal surgery in mice. *Exp. Ther. Med.* 14: 355-360.
2. Dai, Y.W., et al. 2022. Meteorin links the bone marrow hypoxic state to hematopoietic stem/progenitor cell mobilization. *Cell Rep.* 40: 111361.
3. Ardasheva, R., et al. 2023. Effects of electron radiation on serotonin signaling and reactivity of rat gastric smooth muscle. *Toxics* 11: 603.

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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.