SANTA CRUZ BIOTECHNOLOGY, INC.

SR-2C (D-12): sc-17797

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-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.

CHROMOSOMAL LOCATION

Genetic locus: HTR2C (human) mapping to Xq23; Htr2c (mouse) mapping to X F2.

SOURCE

SR-2C (D-12) is a mouse monoclonal antibody raised against amino acids 374-458 mapping at the C-terminus of 5-hydroxytryptamine (serotonin) receptor C (SR-2C) of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SR-2C (D-12) is available conjugated to agarose (sc-17797 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-17797 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-17797 PE), fluorescein (sc-17797 FITC), Alexa Fluor® 488 (sc-17797 AF488), Alexa Fluor® 546 (sc-17797 AF546), Alexa Fluor® 594 (sc-17797 AF594) or Alexa Fluor® 647 (sc-17797 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-17797 AF680) or Alexa Fluor® 790 (sc-17797 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

SR-2C (D-12) is recommended for detection of seritonin 2C receptor (5-HT2C) of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:500), 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-embeded 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).

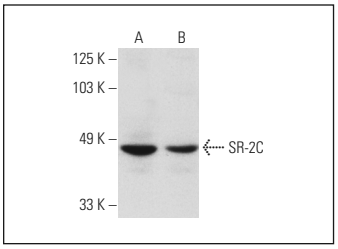
Suitable for use as control antibody for SR-2C siRNA (h): sc-42235, SR-2C siRNA (m): sc-42236, SR-2C shRNA Plasmid (h): sc-42235-SH, SR-2C shRNA Plasmid (m): sc-42236-SH, SR-2C shRNA (h) Lentiviral Particles: sc-42235-V and SR-2C shRNA (m) Lentiviral Particles: sc-42236-V.

Molecular Weight of endogenous SR-2C: 48 kDa.

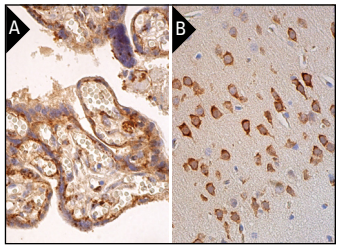
Molecular Weight of glycosylated SR-2C: 63 kDa.

Positive Controls: mouse brain extract: sc-2253, SK-N-MC cell lysate: sc-2237 or rat brain extract: sc-2392.

DATA



SR-2C (D-12): sc-17797. Western blot analysis of SR-2C expression in mouse (**A**) and rat (**B**) brain extracts.



SR-2C (D-12): sc-17797. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic staining of trophoblastic cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human brain tissue showing cytoplasmic staining of neuronal cells.(**B**).

SELECT PRODUCT CITATIONS

1. Morán, A., et al. 2008. Characterization of contractile 5-hydroxytryptamine receptor subtypes in the *in situ* autoperfused kidney in the anaesthetized rat. Eur. J. Pharmacol. 592: 133-137.
2. Kleene, R., et al. 2015. Interaction between CHL1 and serotonin receptor 2c regulates signal transduction and behavior in mice. J. Cell Sci. 128: 4642-4652.
3. Zhang, G., et al. 2016. Activation of serotonin 5-HT(2C) receptor suppresses behavioral sensitization and naloxone-precipitated withdrawal symptoms in morphine-dependent mice. Neuropharmacology 101: 246-254.
4. Khrimian, L., et al. 2017. Gpr158 mediates osteocalcin's regulation of cognition. J. Exp. Med. 214: 2859-2873.

STORAGE

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