

SR-2A (A-15): sc-15073

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.

CHROMOSOMAL LOCATION

Genetic locus: HTR2A (human) mapping to 13q14.2; Htr2a (mouse) mapping to 14 D3.

SOURCE

SR-2A (A-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of SR-2A 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.

Blocking peptide available for competition studies, sc-15073 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SR-2A (A-15) is recommended for detection of serotonin 2A receptor (5-HT_{2A}) of mouse, rat and human 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).

SR-2A (A-15) is also recommended for detection of serotonin 2A receptor (5-HT_{2A}) in additional species, including equine, canine, bovine and porcine.

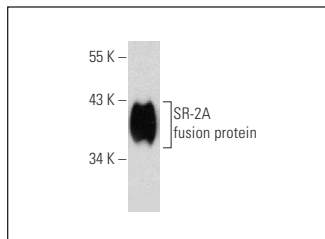
Suitable for use as control antibody for SR-2A siRNA (h): sc-42231, SR-2A siRNA (m): sc-42232, SR-2A shRNA Plasmid (h): sc-42231-SH, SR-2A shRNA Plasmid (m): sc-42232-SH, SR-2A shRNA (h) Lentiviral Particles: sc-42231-V and SR-2A shRNA (m) Lentiviral Particles: sc-42232-V.

Molecular Weight of SR-2A: 55 kDa.

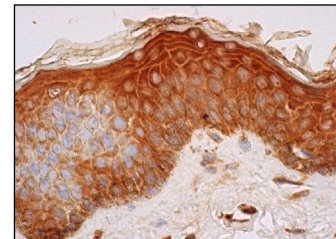
STORAGE

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

DATA



SR-2A (A-15): sc-15073. Western blot analysis of human recombinant SR-2A fusion protein.



SR-2A (A-15): sc-15073. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing cytoplasmic staining of epidermal cells.

SELECT PRODUCT CITATIONS

1. Tachibana, T., et al. 2005. Receptors and transporter for serotonin in Merkel cell-nerve endings in the rat sinus hair follicle. An immunohistochemical study. *Arch. Histol. Cytol.* 68: 19-28.
2. Vikman, P. and Edvinsson, L. 2006. Gene expression profiling in the human middle cerebral artery after cerebral ischemia. *Eur. J. Neurol.* 13: 1324-1332.
3. Capela, J.P., et al. 2006. Ecstasy-induced cell death in cortical neuronal cultures is serotonin 2A-receptor-dependent and potentiated under hyperthermia. *Neuroscience* 139: 1069-1081.
4. Capela, J.P., et al. 2007. Ecstasy induces apoptosis via 5-HT(2A)-receptor stimulation in cortical neurons. *Neurotoxicology* 28: 868-875.
5. 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.
6. Morán, A., et al. 2009. Characterization of the contractile 5-hydroxytryptamine receptor in the autoperfused kidney of L-NAME hypertensive rats. *Eur. J. Pharmacol.* 620: 90-96.
7. Paterson, D.S. and Darnall, R. 2009. 5-HT_{2A} receptors are concentrated in regions of the human infant medulla involved in respiratory and autonomic control. *Auton. Neurosci.* 147: 48-55.

RESEARCH USE

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



Try **SR-2A (A-4): sc-166775**, our highly recommended monoclonal alternative to SR-2A (A-15).