SANTA CRUZ BIOTECHNOLOGY, INC.

SR-3A (A-9): sc-390168

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 pre-dominantly 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. SR-3 is a ligand-gated ion channel, whereas all other known serotonin receptor subtypes are G protein-coupled receptors. SR-4 mediates widespread effects in central and peripheral nervous systems. SR-7 belongs to the superfamily of G protein-coupled receptors. The gene which encodes SR-7 maps to human chromosome 10q21-q24.

REFERENCES

1. Maricq, A.V., et al. 1991. Primary structure and functional expression of the 5HT3 receptor, a serotonin-gated ion channel. Science 254: 432-437.
2. Kenakin, T.P., et al. 1992. Definition of pharmacological receptors. Pharmacol. Rev. 44: 351-362.
3. Ruat, M., et al. 1993. Molecular cloning, characterization, and localization of a high-affinity serotonin receptor (5-HT7) activating cAMP formation. Proc. Natl. Acad. Sci. USA 90: 8547-8551.

CHROMOSOMAL LOCATION

Genetic locus: HTR3A (human) mapping to 11q23.2; Htr3a (mouse) mapping to 9 A5.3.

SOURCE

SR-3A (A-9) is a mouse monoclonal antibody raised against amino acids 341-478 mapping at the C-terminus of SR-3A 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-3A (A-9) is available conjugated to agarose (sc-390168 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390168 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390168 PE), fluorescein (sc-390168 FITC), Alexa Fluor® 488 (sc-390168 AF488), Alexa Fluor® 546 (sc-390168 AF546), Alexa Fluor® 594 (sc-390168 AF594) or Alexa Fluor® 647 (sc-390168 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390168 AF680) or Alexa Fluor® 790 (sc-390168 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

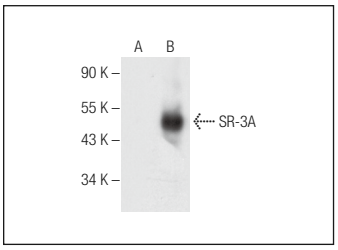
SR-3A (A-9) is recommended for detection of SR-3A of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for SR-3A siRNA (h): sc-42237, SR-3A siRNA (m): sc-42238, SR-3A shRNA Plasmid (h): sc-42237-SH, SR-3A shRNA Plasmid (m): sc-42238-SH, SR-3A shRNA (h) Lentiviral Particles: sc-42237-V and SR-3A shRNA (m) Lentiviral Particles: sc-42238-V.

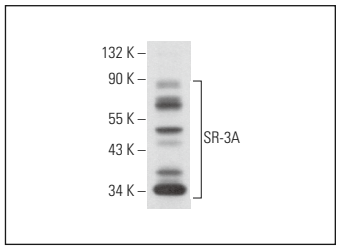
Molecular Weight of SR-3A isoforms: 55/58/54/56/59 kDa.

Positive Controls: SR-3A (h): 293T Lysate: sc-176257 or PC-12 cell lysate: sc-2250.

DATA



SR-3A (A-9): sc-390168. Western blot analysis of SR-3A expression in non-transfected: sc-117752 (**A**) and human SR-3A transfected: sc-176257 (**B**) 293T whole cell lysates.



SR-3A (A-9): sc-390168. Western blot analysis of SR-3A expression in PC-12 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Ruepp, M.D., et al. 2017. The binding orientations of structurally-related ligands can differ; a cautionary note. Neuropharmacology 119: 48-61.
2. Deng, R., et al. 2023. Capsaicin orchestrates metastasis in gastric cancer via modulating expression of TRPV1 channels and driving gut microbiota disorder. Cell Commun. Signal. 21: 364.
3. Liu, L.F., et al. 2023. Inhibiting 5-hydroxytryptamine receptor 3 alleviates pathological changes of a mouse model of Alzheimer's disease. Neural Regen Res. 18: 2019-2028.

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.