

SR-4 (G-3): sc-376158

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. SR-3 is a ligand-gated ion channel, whereas all other known Serotonin receptor subtypes are G protein-coupled receptors. The gene which encodes SR-3 maps to human chromosome 11q23.2. SR-4 mediates widespread effects in central and peripheral nervous systems. The gene which encodes SR-4 maps to human chromosome 5q32. SR-7 belongs to the superfamily of G protein-coupled receptors. The gene which encodes SR-7 maps to human chromosome 10q23.31.

CHROMOSOMAL LOCATION

Genetic locus: HTR4 (human) mapping to 5q32; Htr4 (mouse) mapping to 18 E1.

SOURCE

SR-4 (G-3) is a mouse monoclonal antibody raised against amino acids 156-284 mapping within an internal region of SR-4 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-4 (G-3) is available conjugated to agarose (sc-376158 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376158 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376158 PE), fluorescein (sc-376158 FITC), Alexa Fluor® 488 (sc-376158 AF488), Alexa Fluor® 546 (sc-376158 AF546), Alexa Fluor® 594 (sc-376158 AF594) or Alexa Fluor® 647 (sc-376158 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376158 AF680) or Alexa Fluor® 790 (sc-376158 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

SR-4 (G-3) is recommended for detection of SR-4 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-4 siRNA (h): sc-42239, SR-4 siRNA (m): sc-42240, SR-4 shRNA Plasmid (h): sc-42239-SH, SR-4 shRNA Plasmid (m): sc-42240-SH, SR-4 shRNA (h) Lentiviral Particles: sc-42239-V and SR-4 shRNA (m) Lentiviral Particles: sc-42240-V.

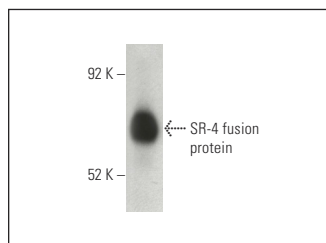
Molecular Weight of SR-4: 42 kDa.

Positive Controls: U-87 MG cell lysate: sc-2411.

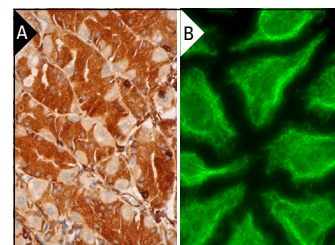
RECOMMENDED SUPPORT REAGENTS

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-4 (G-3): sc-376158. Western blot analysis of full length human recombinant SR-4 fusion protein.



SR-4 (G-3): sc-376158. Immunoperoxidase staining of formalin fixed, paraffin-embedded human upper stomach tissue showing cytoplasmic staining of glandular cells (A). Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization (B).

SELECT PRODUCT CITATIONS

- He, W., et al. 2016. Expression of hyperpolarization-activated cyclic nucleotide-gated channel isoforms in a canine model of atrial fibrillation. *Exp. Ther. Med.* 12: 433-436.
- Zhu, X., et al. 2017. Nicotinamide adenine dinucleotide replenishment rescues colon degeneration in aged mice. *Signal Transduct. Target. Ther.* 2: 17017.
- Sakamoto, C., et al. 2021. Serotonergic signals enhanced hamster sperm hyperactivation. *J. Reprod. Dev.* 67: 241-250.
- Choi, I.Y., et al. 2024. Seizure-induced LIN28A disrupts pattern separation via aberrant hippocampal neurogenesis. *JCI Insight* 9: e175627.
- Koyano, Y., et al. 2025. Influences of 5-hydroxytryptamine on sperm hyperactivation and in vitro fertility in rats. *J. Reprod. Dev.* 71: 85-92.

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.

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