SANTA CRUZ BIOTECHNOLOGY, INC.

GPR14 (D-4): sc-514460

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

GPR14 (G protein-coupled receptor), also designated SENR (sensory epithelium neuropeptide-like receptor), was initially cloned as an "orphan" receptor, which is a receptor that binds an unidentified natural ligand. Further studies have shown that urotensin II (UII), a cyclic neuropeptide, binds to GPR14 with very high affinity. Subsequently, cells transfected with GPR14 experience an increase in calcium concentration upon binding of urotensin II. It is the calcium influx and localization of GPR14 in heart tissues that suggests GPR14 may play a role in the contraction of vascular smooth muscles in response to the specific binding of urotensin II. GPRI4 is also detected in pancreas and, to a lesser extent, in brain tissues.

CHROMOSOMAL LOCATION

Genetic locus: UTS2R (human) mapping to 17q25.3; Uts2r (mouse) mapping to 11 E2.

SOURCE

GPR14 (D-4) is a mouse monoclonal antibody raised against amino acids 10-90 of GPR14 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.

GPR14 (D-4) is available conjugated to agarose (sc-514460 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514460 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514460 PE), fluorescein (sc-514460 FITC), Alexa Fluor® 488 (sc-514460 AF488), Alexa Fluor® 546 (sc-514460 AF546), Alexa Fluor® 594 (sc-514460 AF594) or Alexa Fluor® 647 (sc-514460 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514460 AF680) or Alexa Fluor® 790 (sc-514460 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

GPR14 (D-4) is recommended for detection of GPR14 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 GPR14 siRNA (m): sc-37107, GPR14 shRNA Plasmid (m): sc-37107-SH and GPR14 shRNA (m) Lentiviral Particles: sc-37107-V.

Molecular Weight of glycosylated GPR14: 60 kDa.

Molecular Weight of deglycosylated GPR14: 42 kDa.

Positive Controls: human heart extract: sc-363763, Jurkat whole cell lysate: sc-2204 or HeLa whole cell lysate: sc-2200.

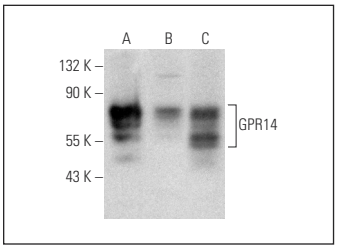
RESEARCH USE

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

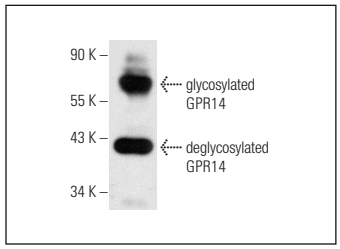
STORAGE

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

DATA



GPR14 (D-4): sc-514460. Western blot analysis of GPR14 expression in Jurkat (**A**), HeLa (**B**) and IMR-32 (**C**) whole cell lysates.



GPR14 (D-4): sc-514460. Western blot analysis of GPR14 expression in human heart tissue extract.

SELECT PRODUCT CITATIONS

1. Wang, T., et al. 2020. The peptide compound urantide regulates collagen metabolism in atherosclerotic rat hearts and inhibits the JAK2/STAT3 pathway. Mol. Med. Rep. 21: 1097-1106.
2. Wang, T., et al. 2020. Urotensin receptor antagonist urantide improves atherosclerosis-related kidney injury by inhibiting JAK2/STAT3 signaling pathway in rats. Life Sci. 247: 117421.
3. Zhao, J., et al. 2020. Urantide attenuates myocardial damage in atherosclerotic rats by regulating the MAPK signalling pathway. Life Sci. 262: 118551.
4. Cui, H., et al. 2021. Urantide decreases hepatic steatosis in rats with experimental atherosclerosis via the MAPK/Erk/JNK pathway. Mol. Med. Rep. 23: 284.
5. Wang, T., et al. 2021. Urantide alleviates the symptoms of atherosclerotic rats *in vivo* and *in vitro* models through the JAK2/STAT3 signaling pathway. Eur. J. Pharmacol. 902: 174037.
6. Li, Y., et al. 2021. Urantide prevents CCl4-induced acute liver injury in rats by regulating the MAPK signalling pathway. Mol. Med. Rep. 24: 688.
7. Gravina, A.G., et al. 2023. The urotensin-II receptor: a marker for staging and steroid outcome prediction in ulcerative colitis. Eur. J. Clin. Invest. E-published.

PROTOCOLS

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