

ROS-GC1 (H-225): sc-50512

BACKGROUND

Guanylate cyclases belong to the adenylyl cyclase class-4/guanylyl cyclase family. There are two forms of guanylate cyclase, a soluble form (GCS or sGC) and a membrane-bound receptor form. Rod outer segment membrane guanylate cyclase (ROS-GC) is a critical component of the vertebrate phototransduction machinery. ROS-GC1 is present in the retinal tissue and is localized exclusively in the nuclei and inner segments of the rod and cone photoreceptor cells. Defects in GUCY2D, the gene encoding ROS-GC1, are a cause of dominant cone-rod dystrophy type 6 (CORD6). CORD6 disease is characterized by the initial degeneration of cone photoreceptor cells, causing early loss of visual acuity and color vision, followed by the degeneration of rod photoreceptor cells leading to progressive night blindness and peripheral visual field loss.

CHROMOSOMAL LOCATION

Genetic locus: GUCY2D (human) mapping to 17p13.1; Gucy2e (mouse) mapping to 11 B3.

SOURCE

ROS-GC1 (H-225) is a rabbit polyclonal antibody raised against amino acids 81-305 mapping within an N-terminal extracellular domain of ROS-GC1 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.

STORAGE

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

APPLICATIONS

ROS-GC1 (H-225) is recommended for detection of ROS-GC1 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ROS-GC1 (H-225) is also recommended for detection of ROS-GC1 in additional species, including bovine.

Suitable for use as control antibody for ROS-GC1 siRNA (h): sc-45429, ROS-GC1 siRNA (m): sc-45430, ROS-GC1 shRNA Plasmid (h): sc-45429-SH, ROS-GC1 shRNA Plasmid (m): sc-45430-SH, ROS-GC1 shRNA (h) Lentiviral Particles: sc-45429-V and ROS-GC1 shRNA (m) Lentiviral Particles: sc-45430-V.

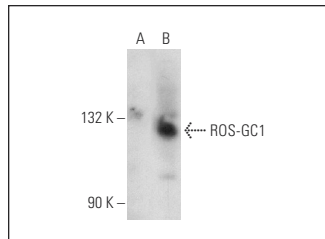
Molecular Weight of ROS-GC1: 120 kDa.

Positive Controls: ROS-GC1 (h): 293T Lysate: sc-129683 or rat eye extract: sc-364805.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



ROS-GC1 (H-225): sc-50512. Western blot analysis of ROS-GC1 expression in non-transfected: sc-117752 (A) and human ROS-GC1 transfected: sc-129683 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Boye, S.E., et al. 2010. Functional and behavioral restoration of vision by gene therapy in the guanylate cyclase-1 (GC1) knockout mouse. *PLoS ONE* 5: e11306.
- Zägel, P., et al. 2013. The dimerization domain in outer segment guanylate cyclase is a Ca²⁺-sensitive control switch module. *Biochemistry* 52: 5065-5074.

RESEARCH USE

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

PROTOCOLS

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


 MONOS
Satisfaction
Guaranteed

Try **ROS-GC1 (B-7): sc-376217** or **ROS-GC1 (A-5): sc-514879**, our highly recommended monoclonal alternatives to ROS-GC1 (H-225).