

Rho G (1F3 B3 E5): sc-80015

BACKGROUND

The Ras p21 family of guanine nucleotide proteins has been widely studied in view of its apparent role in signal transduction pathways and high frequency of mutations in human malignancies. It is now clear, however, that the Ras proteins (H-, K- and N-Ras p21) are members of a much larger superfamily of related proteins. Six members of this family, Rap 1A, Rap 1B, Rap 2, R-Ras, Ral A and Ral B, exhibit approximately 50% amino acid homology to Ras. The five mammalian Rho proteins (Rho A, B, C, G, 7 and 8) are approximately 30% homologous to Ras and are expressed in a wide range of cell types. Both Ras p21 and Rho p21, as well as other members of the Ras superfamily, contain a carboxy-terminal CAAX sequence (C, cysteine; A, aliphatic amino acid; X, any amino acid) which in the case of Ras has been shown to be essential for correct localization and function.

CHROMOSOMAL LOCATION

Genetic locus: RHOG (human) mapping to 11p15.4; Rhog (mouse) mapping to 7 E3.

SOURCE

Rho G (1F3 B3 E5) is a mouse monoclonal antibody raised against a C-terminal Rho G peptide of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Rho G (1F3 B3 E5) is available conjugated to agarose (sc-80015 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-80015 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-80015 PE), fluorescein (sc-80015 FITC), Alexa Fluor® 488 (sc-80015 AF488), Alexa Fluor® 546 (sc-80015 AF546), Alexa Fluor® 594 (sc-80015 AF594) or Alexa Fluor® 647 (sc-80015 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-80015 AF680) or Alexa Fluor® 790 (sc-80015 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Rho G (1F3 B3 E5) is recommended for detection of endogenous Rho G of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for Rho G siRNA (h): sc-41889, Rho G siRNA (m): sc-41890, Rho G shRNA Plasmid (h): sc-41889-SH, Rho G shRNA Plasmid (m): sc-41890-SH, Rho G shRNA (h) Lentiviral Particles: sc-41889-V and Rho G shRNA (m) Lentiviral Particles: sc-41890-V.

Molecular Weight of Rho G: 21 kDa.

Positive Controls: MDA-MB-231 cell lysate: sc-2232, C6 whole cell lysate: sc-364373 or RAW 264.7 whole cell lysate: sc-2211.

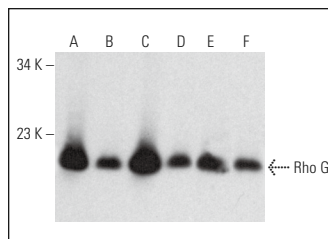
STORAGE

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

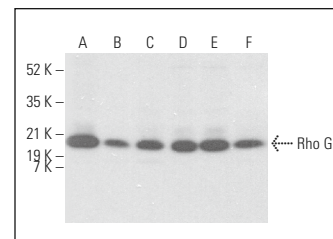
RESEARCH USE

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

DATA



Rho G (1F3 B3 E5): sc-80015. Western blot analysis of Rho G expression in MDA-MB-231 (A), Jurkat (B), RAW 264.7 (C), Neuro-2A (D) and NRK (E) and C6 (F) whole cell lysates.



Rho G (1F3 B3 E5): sc-80015. Western blot analysis of Rho G expression in Jurkat (A), M1 (B), K-562 (C), MEG-01 (D), TF-1 (E) and HEL 92.1.7 (F) whole cell lysates.

SELECT PRODUCT CITATIONS

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- Goggs, R., et al. 2013. The small GTPase Rif is dispensable for platelet filopodia generation in mice. *PLoS ONE* 8: e54663.
- Jackson, B.C., et al. 2015. An ELM02-Rho G-ILK network modulates microtubule dynamics. *Mol. Biol. Cell* 26: 2712-2725.
- de León-Bautista, M.P., et al. 2016. Immunological and functional characterization of RhoGDI3 and its molecular targets Rho G and Rho B in human pancreatic cancerous and normal cells. *PLoS ONE* 11: e0166370.
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- Kim, K., et al. 2018. The intermolecular interaction of Ephexin4 leads to autoinhibition by impeding binding of Rho G. *Cells* 7: 211.
- Kaibori, Y., et al. 2019. EphA2 phosphorylation at Ser 897 by the Cdk1/MEK/ERK/RSK pathway regulates M-phase progression via maintenance of cortical rigidity. *FASEB J.* 33: 5334-5349.
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- Clement, E.J., et al. 2022. Combined alcohol exposure and KRAS mutation in human pancreatic ductal epithelial cells induces proliferation and alters subtype signatures determined by multi-omics analysis. *Cancers* 14: 1968.

PROTOCOLS

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

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