

Ral GDS (C-11): sc-393809

BACKGROUND

Ral A and Ral B constitute a distinct subfamily of Ras-related GTPases (i.e., GDP/GTP binding proteins). Ral proteins are activated by a unique nucleotide exchange factor, Ral GDS, and deactivated by a distinct GTPase-activating protein. Unlike Ras proteins, Ral A and Ral B fail to induce transformed foci when activated variants are expressed in various recipient cells. A potential downstream target of Ral, designated Ral BP-1, has been shown to contain a Rho-GTPase-activating domain. This Rho-GTPase-activating domain interacts preferentially with the Rho family member Cdc42. A Ras/Ral signaling pathway has been reported to mediate phospholipase D (PLD) activation by v-Src, thus indicating PLD as another downstream target of Ral A.

REFERENCES

1. Wildey, G.M., et al. 1993. Isolation of cDNA clones and tissue expression of rat Ral A and ral B GTP-binding proteins. *Biochem. Biophys. Res. Commun.* 194: 552-559.
2. Hofer, F., et al. 1994. Activated Ras interacts with the Ral guanine nucleotide dissociation stimulator. *Proc. Natl. Acad. Sci. USA* 91: 11089-11093.
3. Spaargaren, M. and Bischoff, J.R. 1994. Identification of the guanine nucleotide dissociation stimulator for Ral as a putative effector molecule of R-Ras, H-Ras, K-Ras, and Rap. *Proc. Natl. Acad. Sci. USA* 91: 12609-12613.
4. Cantor, S.B., et al. 1995. Identification and characterization of Ral-binding protein 1, a potential downstream target of Ral GTPases. *Mol. Cell. Biol.* 15: 4578-4584.
5. Jullien-Flores, V., et al. 1995. Bridging Ral GTPase to Rho pathways. RLIP76, a Ral effector with CDC42/Rac GTPase-activating protein activity. *J. Biol. Chem.* 270: 22473-22477.

CHROMOSOMAL LOCATION

Genetic locus: RALGDS (human) mapping to 9q34.2; Ralgs (mouse) mapping to 2 A3.

SOURCE

Ral GDS (C-11) is a mouse monoclonal antibody raised against amino acids 42-110 mapping near the N-terminus of Ral GDS 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.

Ral GDS (C-11) is available conjugated to agarose (sc-393809 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393809 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393809 PE), fluorescein (sc-393809 FITC), Alexa Fluor® 488 (sc-393809 AF488), Alexa Fluor® 546 (sc-393809 AF546), Alexa Fluor® 594 (sc-393809 AF594) or Alexa Fluor® 647 (sc-393809 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393809 AF680) or Alexa Fluor® 790 (sc-393809 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Ral GDS (C-11) is recommended for detection of Ral GDS 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 Ral GDS siRNA (h): sc-41730, Ral GDS siRNA (m): sc-41731, Ral GDS shRNA Plasmid (h): sc-41730-SH, Ral GDS shRNA Plasmid (m): sc-41731-SH, Ral GDS shRNA (h) Lentiviral Particles: sc-41730-V and Ral GDS shRNA (m) Lentiviral Particles: sc-41731-V.

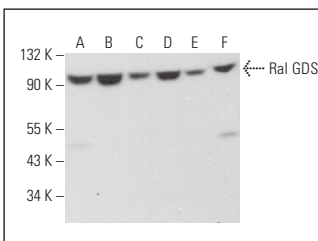
Molecular Weight of Ral GDS: 115 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Hep G2 cell lysate: sc-2227 or human liver extract: sc-363766.

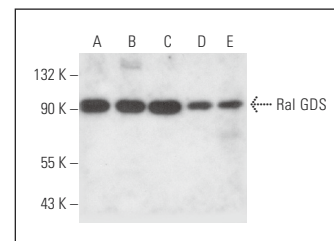
RECOMMENDED SUPPORT REAGENTS

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.

DATA



Ral GDS (C-11): sc-393809. Western blot analysis of Ral GDS expression in NIH/3T3 (A), IMR-32 (B), MIA PaCa-2 (C), HeLa (D), Hep G2 (E) and c4 (F) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



Ral GDS (C-11): sc-393809. Western blot analysis of Ral GDS expression in HeLa (A), MIA PaCa-2 (B), Hep G2 (C) and 293 (D) whole cell lysates and human liver tissue extract (E).

SELECT PRODUCT CITATIONS

1. Wang, Z., et al. 2022. RILP inhibits proliferation, migration, and invasion of PC3 prostate cancer cells. *Acta Histochem.* 124: 151938.

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.