

Ral A (F-5): sc-374462

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.

CHROMOSOMAL LOCATION

Genetic locus: RALA (human) mapping to 7p14.1; Rala (mouse) mapping to 13 A2.

SOURCE

Ral A (F-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 181-209 at the C-terminus of Ral A of human origin.

PRODUCT

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

Ral A (F-5) is available conjugated to agarose (sc-374462 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374462 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374462 PE), fluorescein (sc-374462 FITC), Alexa Fluor® 488 (sc-374462 AF488), Alexa Fluor® 546 (sc-374462 AF546), Alexa Fluor® 594 (sc-374462 AF594) or Alexa Fluor® 647 (sc-374462 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374462 AF680) or Alexa Fluor® 790 (sc-374462 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-374462 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Ral A (F-5) is recommended for detection of Ral A 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 Ral A siRNA (h): sc-41842, Ral A siRNA (m): sc-41843, Ral A shRNA Plasmid (h): sc-41842-SH, Ral A shRNA Plasmid (m): sc-41843-SH, Ral A shRNA (h) Lentiviral Particles: sc-41842-V and Ral A shRNA (m) Lentiviral Particles: sc-41843-V.

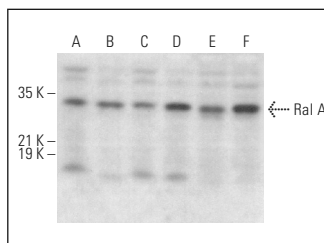
Molecular Weight of Ral A: 28 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409, ZR-75-1 cell lysate: sc-2241 or NTERA-2 cl.D1 whole cell lysate: sc-364181.

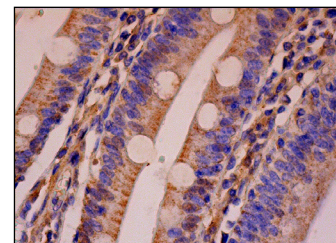
RECOMMENDED SUPPORT REAGENTS

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



Ral A (F-5): sc-374462. Western blot analysis of Ral A expression in HUV-EC-C (A), ZR-75-1 (B), NTERA-2 cl.D1 (C), IMR-32 (D), NIH/3T3 (E) and C6 (F) whole cell lysates.



Ral A (F-5): sc-374462. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

- Naidu, S., et al. 2017. PDGFR-modulated miR-23b cluster and miR-125a-5p suppress lung tumorigenesis by targeting multiple components of KRAS and NFκB pathways. *Sci. Rep.* 7: 15441.
- Wang, X., et al. 2020. RalA exerts an inhibitory effect on IL-1β/IL-18 secretion by blocking NLRP3 inflammasome activation in levornidazole-treated human THP-1 macrophages. *Int. Immunopharmacol.* 88: 106898.

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.

PROTOCOLS

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

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA