SANTA CRUZ BIOTECHNOLOGY, INC.

Ral A/B (H-46): sc-28574

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Ral A and Ral B constitute a distinct subfamily of Ras-related GTPases (i.e., GDP/GTP binding proteins) (1-3). 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., Viggeswarapu, M., Rim, S. and Denker, J.K. 1993. Isolation of cDNA clones and tissue expression of rat ral A and ral B GTP-binding proteins. Biochem. Biophys. Res. Comm. 1394: 552-559.
2. Hofer, F., Fields, S., Schneider, C. and Martin, G.S. 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. Jullien-Flores, V., Dorseuil, O., Romero, F., Letourneur, F., Saragosti, S., Berger, R., Tavitian, A., Gacon, G. and Camonis, J.H. 1995. Bridging Ral GTPase to Rho pathways. RLIP76, a Ral effector with CDC42/Rac GTPase-activating protein activity. J. Biol. Chem. 270: 22473-22477.
5. Jiang, H., Luo, J.Q., Urano, T., Frankel, P., Lu, Z., Foster, D.A. and Feig, L.A. 1995. Involvement of Ral GTPase in v-Src-induced phospholipase D activation. Nature 378: 409-412.
6. Cantor, S.B., Urano, T. and Feig, L.A. 1995. Identification and characterization of Ral-binding protein 1, a potential downstream target of Ral GTPases. Mol. Cell. Biol. 15: 4578-4584.

CHROMOSOMAL LOCATION

Genetic locus: RALA (human) mapping to 7p14.1, RALB (human) mapping to 2q14.2; Rala (mouse) mapping to 13 A2, Ralb (mouse) mapping to 1 E2.3.

SOURCE

Ral A/B (H-46) is a rabbit polyclonal antibody raised against amino acids 161-206 mapping at the C-terminus of Ral A 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

Ral A/B (H-46) is recommended for detection of Ral A and B 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).

Ral A/B (H-46) is also recommended for detection of Ral A and B in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of Ral A: 28 kDa.

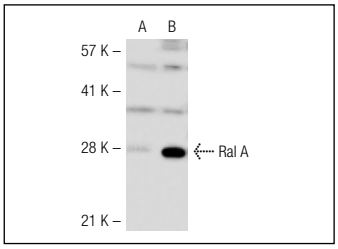
Molecular Weight of Ral B: 23 kDa.

Positive Controls: Ral A (h2): 293T Lysate: sc-115540.

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



Ral A/B (H-46): sc-28574. Western blot analysis of Ral A expression in non-transfected: sc-117752 (**A**) and human Ral A transfected: sc-115540 (**B**) 293T whole cell lysates.

RESEARCH USE

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