

Ral GPS1 (D-16): sc-162074

BACKGROUND

Ral GPS1 (Ral GEF with PH domain and SH3-binding motif 1), also known as RalGEF 2 (Ral guanine nucleotide exchange factor 2), is a 557 amino acid guanine nucleotide exchange factor for Ral A. Localized to cytoplasm, Ral GPS1 contains one PH domain, which associates with the cell membrane, and one Ras-GEF domain. Ral GPS1 may play a role in cytoskeletal organization as well as the stimulation of transcription in a Ras-independent manner. Ral GPS1 has been found to interact with the SH3 domains of SRC-1, NCK1, PLC γ 1 and GRB2. Ral GPS1 is expressed as six isoforms produced by alternative splicing events. Isoform 1 is expressed highly in testis and heart, while isoform 2 is found at high levels in kidney, colon, brain, small intestine, testis, uterus, thymus and skeletal muscle.

REFERENCES

1. Nagase, T., et al. 1997. Prediction of the coding sequences of unidentified human genes. VII. The complete sequences of 100 new cDNA clones from brain which can code for large proteins *in vitro*. DNA Res. 4: 141-150.
2. Rebhun, J.F., et al. 2000. Identification and characterization of a new family of guanine nucleotide exchange factors for the Ras-related GTPase Ral. J. Biol. Chem. 275: 13406-13410.
3. de Bruyn, K.M., et al. 2000. RalGEF 2, a pleckstrin homology domain containing guanine nucleotide exchange factor for Ral. J. Biol. Chem. 275: 29761-29766.
4. Humphray, S.J., et al. 2004. DNA sequence and analysis of human chromosome 9. Nature 429: 369-374.
5. Aitio, O., et al. 2008. Structural basis of PxxDY motif recognition in SH3 binding. J. Mol. Biol. 382: 167-178.

CHROMOSOMAL LOCATION

Genetic locus: RALGPS1 (human) mapping to 9q33.3; Ralgps1 (mouse) mapping to 2 B.

SOURCE

Ral GPS1 (D-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Ral GPS1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-162074 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

PROTOCOLS

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

APPLICATIONS

Ral GPS1 (D-16) is recommended for detection of Ral GPS1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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); non cross-reactive with Ral GPS2.

Ral GPS1 (D-16) is also recommended for detection of Ral GPS1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Ral GPS1 siRNA (h): sc-92962, Ral GPS1 siRNA (m): sc-152689, Ral GPS1 shRNA Plasmid (h): sc-92962-SH, Ral GPS1 shRNA Plasmid (m): sc-152689-SH, Ral GPS1 shRNA (h) Lentiviral Particles: sc-92962-V and Ral GPS1 shRNA (m) Lentiviral Particles: sc-152689-V.

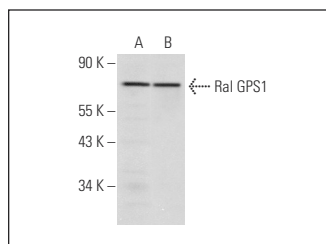
Molecular Weight of Ral GPS1 isoforms: 12-62 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409 or KNRK whole cell lysate: sc-2214.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Ral GPS1 (D-16): sc-162074. Western blot analysis of Ral GPS1 expression in IMR-32 (A) and KNRK (B) whole cell lysates.

RESEARCH USE

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