



RRP22 (S-19): sc-86842

BACKGROUND

Members of the Ras superfamily of small GTP-binding proteins are critical mediators of diverse cell signaling pathways, including those leading to cell proliferation, cytoskeletal organization and secretion. The counter-conversion of the active GTP-bound form of these proteins to their inactive GDP-bound form is influenced by two types of regulatory proteins: those that alter the intrinsic GTPase activity of the GTP-binding proteins and those that alter the rate of GDP/GTP exchange. Guanine nucleotide-releasing factors (GRFs) increase the GDP dissociation rate, while GDP-dissociation inhibitors (GDIs) decrease the dissociation rate. RRP22 (Ras-related protein on chromosome 22), also known as RASL10A, is a 203 amino acid cell membrane protein belonging to the RAS family of the small GTPase superfamily. Unlike Ras, RRP22 inhibits cell growth and promotes caspase-independent cell death. Existing as two alternatively spliced isoforms, RRP22 is considered a potential tumor suppressor.

REFERENCES

- Hall, A. 1990. The cellular functions of small GTP-binding proteins. *Science* 249: 635-640.
- Bourne, H.R., et al. 1990. The GTPase superfamily: a conserved switch for diverse cell functions. *Nature* 348: 125-132.
- Scheffzek, K., et al. 1995. Crystal structure of the nuclear Ras-related protein Ran in its GDP-bound form. *Nature* 374: 378-381.
- Zucman-Rossi, J., et al. 1996. Identification of new members of the Gas2 and Ras families in the 22q12 chromosome region. *Genomics* 38: 247-254.
- Roa, M., et al. 1997. Involvement of the ras-like GTPase rab3d in RBL-2H3 mast cell exocytosis following stimulation via high affinity IgE receptors (Fc ϵ RI). *J. Immunol.* 159: 2815-2823.
- Elam, C., et al. 2005. RRP22 is a farnesylated, nucleolar, Ras-related protein with tumor suppressor potential. *Cancer Res.* 65: 3117-3125.

CHROMOSOMAL LOCATION

Genetic locus: RASL10A (human) mapping to 22q12.2; Rasl10a (mouse) mapping to 11 A1.

SOURCE

RRP22 (S-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of RRP22 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-86842 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.

APPLICATIONS

RRP22 (S-19) is recommended for detection of RRP22 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 other RRP family members.

Suitable for use as control antibody for RRP22 siRNA (h): sc-76436, RRP22 siRNA (m): sc-153132, RRP22 shRNA Plasmid (h): sc-76436-SH, RRP22 shRNA Plasmid (m): sc-153132-SH, RRP22 shRNA (h) Lentiviral Particles: sc-76436-V and RRP22 shRNA (m) Lentiviral Particles: sc-153132-V.

Molecular Weight of RRP22: 23 kDa.

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) 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.

RESEARCH USE

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

PROTOCOLS

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