

DIRAS1 (C-13): sc-240323

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. DIRAS1 (DIRAS family, GTP-binding Ras-like 1), also known as distinct subgroup of the Ras family member 1, RIG (Ras-related inhibitor of cell growth), small GTP-binding tumor suppressor 1 or GBTS1, is a 198 amino acid cell membrane protein expressed at high levels in brain and heart. DIRAS1 displays low GTPase activity and is encoded by a gene that maps to human chromosome 19p13.3.

REFERENCES

1. Bourne, H.R., et al. 1990. The GTPase superfamily: a conserved switch for diverse cell functions. *Nature* 348: 125-132.
2. Hall, A. 1990. The cellular functions of small GTP-binding proteins. *Science* 249: 635-640.
3. Grunicke, H.H. and Maly, K. 1993. Role of GTPases and GTPase regulatory proteins in oncogenesis. *Crit. Rev. Oncog.* 4: 389-402.
4. Kontani, K., et al. 2002. Di-Ras, a distinct subgroup of ras family GTPases with unique biochemical properties. *J. Biol. Chem.* 277: 41070-41078.
5. Ellis, C.A., et al. 2002. Rig is a novel Ras-related protein and potential neural tumor suppressor. *Proc. Natl. Acad. Sci. USA* 99: 9876-9881.
6. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 607862. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
7. Kweon, S.M., et al. 2008. Activity of the Bcr GTPase-activating domain is regulated through direct protein/protein interaction with the Rho guanine nucleotide dissociation inhibitor. *J. Biol. Chem.* 283: 3023-3030.

CHROMOSOMAL LOCATION

Genetic locus: DIRAS1 (human) mapping to 19p13.3.

SOURCE

DIRAS1 (C-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of DIRAS1 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.

Blocking peptide available for competition studies, sc-240323 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

DIRAS1 (C-13) is recommended for detection of DIRAS1 of 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); non cross-reactive with DIRAS2.

Suitable for use as control antibody for DIRAS1 siRNA (h): sc-97300, DIRAS1 shRNA Plasmid (h): sc-97300-SH and DIRAS1 shRNA (h) Lentiviral Particles: sc-97300-V.

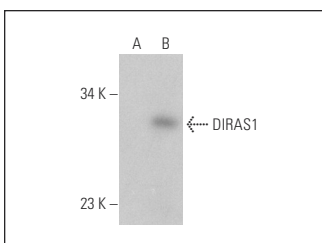
Molecular Weight of DIRAS1: 22 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, TE671 cell lysate: sc-2416 or DIRAS1 (h2): 293T Lysate: sc-171937.

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



DIRAS1 (C-13): sc-240323. Western blot analysis of DIRAS1 expression in non-transfected: sc-117752 (A) and human DIRAS1 transfected: sc-171937 (B) 293T whole cell lysates.

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.