



DIRAS1 (h2): 293T Lysate: sc-171937

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., Sanders, D.A. and McCormick, F. 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., Tada, M., Ogawa, T., Okai, T., Saito, K., Araki, Y. and Katada, T. 2002. Di-Ras, a distinct subgroup of ras family GTPases with unique biochemical properties. *J. Biol. Chem.* 277: 41070-41078.
5. Ellis, C.A., Vos, M.D., Howell, H., Vallecorsa, T., Fufts, D.W. and Clark, G.J. 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., Cho, Y.J., Minoo, P., Groffen, J. and Heisterkamp, N. 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.

PRODUCT

DIRAS1 (h2): 293T Lysate represents a lysate of human DIRAS1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

DIRAS1 (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive DIRAS1 antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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.