



RHOBTB1 (h): 293T Lysate: sc-171345

BACKGROUND

The Rho subfamily of Ras-related GTPases controls multiple aspects of cell function, including cytoskeletal rearrangement, nuclear signaling and cell growth. RHOBTB1 (Rho-related BTB domain-containing protein 1) and RHOBTB3 (Rho-related BTB domain-containing protein 3) each contain two BTB (POZ) domains and belong to the RhoBTB subfamily of Rho GTPases. Members of the RhoBTB subfamily are evolutionarily conserved and are characterized by a proline-rich region, a GTPase domain and two tandem BTB repeats. While both RHOBTB1 and RHOBTB3 are expressed ubiquitously, RHOBTB1 is found at high levels in placenta, stomach, testis, kidney and skeletal muscle, whereas RHOBTB3 is found at high levels in neural and cardiac tissues. RHOBTB1 is thought to play a role in GTPase-mediated signaling and may participate in organization of the Actin filament system. Additionally, RHOBTB1 expression is decreased in head and neck carcinomas, suggesting a possible role for RHOBTB1 as a tumor suppressor.

REFERENCES

1. Rivero, F., Dislich, H., Glöckner, G. and Noegel, A.A. 2001. The *Dictyostelium discoideum* family of Rho-related proteins. *Nucleic Acids Res.* 29: 1068-1079.
2. Ramos, S., Khademi, F., Somesh, B.P. and Rivero, F. 2002. Genomic organization and expression profile of the small GTPases of the RHOBTB family in human and mouse. *Gene* 298: 147-157.
3. Aspenström, P., Fransson, A. and Saras, J. 2004. Rho GTPases have diverse effects on the organization of the Actin filament system. *Biochem. J.* 377: 327-337.
4. Vlahou, G. and Rivero, F. 2006. Rho GTPase signaling in *Dictyostelium discoideum*: insights from the genome. *Eur. J. Cell Biol.* 85: 947-959.
5. Beder, L.B., Gunduz, M., Ouchida, M., Gunduz, E., Sakai, A., Fukushima, K., Nagatsuka, H., Ito, S., Honjo, N., Nishizaki, K. and Shimizu, K. 2006. Identification of a candidate tumor suppressor gene RHOBTB1 located at a novel allelic loss region 10q21 in head and neck cancer. *J. Cancer Res. Clin. Oncol.* 132: 19-27.
6. Aspenström, P., Ruusala, A. and Pacholsky, D. 2007. Taking Rho GTPases to the next level: the cellular functions of atypical Rho GTPases. *Exp. Cell Res.* 313: 3673-3679.
7. Boureux, A., Vignal, E., Faure, S. and Fort, P. 2007. Evolution of the Rho family of Ras-like GTPases in eukaryotes. *Mol. Biol. Evol.* 24: 203-216.
8. Berthold, J., Schenkova, K. and Rivero, F. 2008. Rho GTPases of the RHOBTB subfamily and tumorigenesis. *Acta Pharmacol. Sin.* 29: 285-295.

CHROMOSOMAL LOCATION

Genetic locus: RHOBTB1 (human) mapping to 10q21.2.

PRODUCT

RHOBTB1 (h): 293T Lysate represents a lysate of human RHOBTB1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

RHOBTB1 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive RHOBTB1 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.