

ROD1 (m2): 293T Lysate: sc-125944

BACKGROUND

Differentiation is a fundamental attribute of multicellular organisms that is required for their body formation. Commitment to differentiation is regulated by a variety of signals and cellular conditions, including availability of differentiation factors, cell-cell contacts and physical and chemical stresses. In the fission yeast *Schizosaccharomyces pombe*, the *nrd1* gene encoding an RNA binding protein negatively regulates the onset of differentiation. The mammalian homologue of *nrd1* is ROD1, which encodes a protein with four repeats of typical RNA binding domains. When expressed in fission yeast, the ROD1 protein functions similar to *nrd1*. ROD1 is highly expressed in adult and embryo hematopoietic cells or organs. Overexpression of ROD1 effectively blocks the differentiation of human leukemia cells without affecting their proliferative ability, suggesting that ROD1 plays a critical role in controlling differentiation in mammalian cells.

REFERENCES

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2. Leupold, U. 1987. Sex appeal in fission yeast. Curr. Genet. 12: 543-545.
3. Horvitz, H.R. and Herskowitz, I. 1992. Mechanisms of asymmetric cell division: two Bs or not Bs, that is the question. Cell 68: 237-255.
4. Wu, A.L., Hallstrom, T.C. and Moye-Rowley, W.S. 1996. ROD1, a novel gene conferring multiple resistance phenotypes in *Saccharomyces cerevisiae*. J. Biol. Chem. 271: 2914-2920.
5. Yamamoto, H., Tsukahara, K., Kanaoka, Y., Jinno, S. and Okayama, H. 1999. Isolation of a mammalian homologue of a fission yeast differentiation regulator. Mol. Cell. Biol. 19: 3829-3841.

CHROMOSOMAL LOCATION

Genetic locus: Rod1 (mouse) mapping to 4 B3.

PRODUCT

ROD1 (m2): 293T Lysate represents a lysate of mouse ROD1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

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.

APPLICATIONS

ROD1 (m2): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive ROD1 antibodies. Recommended use: 10-20 µl per lane.

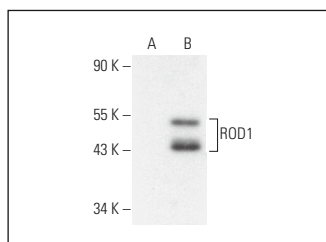
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

ROD1 (C-1): sc-398105 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse ROD1 expression in ROD1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



ROD1 (C-1): sc-398105. Western blot analysis of ROD1 expression in non-transfected: sc-117752 (A) and mouse ROD1 transfected: sc-125944 (B) 293T whole cell lysates.

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.