

# ROD1 (N-18): sc-15250

## 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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3. Horvitz, H.R. and I. Herskowitz. 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 (human) mapping to 9q32.

## SOURCE

ROD1 (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ROD1 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-15250 P, (100 µg 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## APPLICATIONS

ROD1 (N-18) is recommended for detection of ROD1 of 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).

Suitable for use as control antibody for ROD1 siRNA (h): sc-106897, ROD1 shRNA Plasmid (h): sc-106897-SH and ROD1 shRNA (h) Lentiviral Particles: sc-106897-V.

## 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.