

# Rab 33B (C-14): sc-324250

## BACKGROUND

The Ras-related superfamily of guanine nucleotide binding proteins includes the R-Ras, Rap, Ral/Rec and Rho/Rab subfamilies. Increasing data suggests an important role for Rab proteins in either endocytosis or in biosynthetic protein transport. The process of transporting newly synthesized proteins from the endoplasmic reticulum to various stacks of the Golgi complex and to secretory vesicles involves the movement of carrier vesicles and requires Rab protein function. Rab proteins are also an integral part of endocytic pathways. Rab 33B is a ubiquitously expressed member of the Rab family of proteins and co-localizes with  $\alpha$ -mannosidase II (a Golgi marker) at the medial-Golgi cisternae. Rab 33B and Rab 33A share conserved effector domains but share only 55.3% overall amino acid identity. This suggests that Rab 33B and Rab 33A may interact with similar effector and regulatory proteins. Rab 33B is believed to participate in intra-Golgi transport.

## REFERENCES

1. Zheng, J.Y., et al. 1998. A novel Rab GTPase, Rab 33B, is ubiquitously expressed and localized to the medial Golgi cisternae. *J. Cell Sci.* 111: 1061-1069.
2. Valsdottir, R., et al. 2001. Identification of RABAPTIN-5, Rabex-5, and GM130 as putative effectors of Rab 33B, a regulator of retrograde traffic between the Golgi apparatus and ER. *FEBS Lett.* 508: 201-209.
3. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 605950. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Junutula, J.R., et al. 2004. Rab 14 is involved in membrane trafficking between the Golgi complex and endosomes. *Mol. Biol. Cell* 15: 2218-2229.
5. Jiang, S. and Storrie, B. 2005. Cisternal Rab proteins regulate Golgi apparatus redistribution in response to hypotonic stress. *Mol. Biol. Cell* 16: 2586-2596.
6. Dastani, Z., et al. 2006. Evidence for a gene influencing high-density lipoprotein cholesterol on chromosome 4q31.21. *Arterioscler. Thromb. Vasc. Biol.* 26: 392-397.
7. Proikas-Cezanne, T., et al. 2006. Rab 14 is part of the early endosomal clathrin-coated TGN microdomain. *FEBS Lett.* 580: 5241-5246.

## CHROMOSOMAL LOCATION

Genetic locus: RAB33B (human) mapping to 4q31.1; Rab33b (mouse) mapping to 3 C.

## SOURCE

Rab 33B (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Rab 33B of human origin.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-324250 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Rab 33B (C-14) is recommended for detection of Rab 33B of mouse, rat and 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); non cross-reactive with Rab 33A.

Rab 33B (C-14) is also recommended for detection of Rab 33B in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for Rab 33B siRNA (h): sc-88899, Rab 33B siRNA (m): sc-152638, Rab 33B shRNA Plasmid (h): sc-88899-SH, Rab 33B shRNA Plasmid (m): sc-152638-SH, Rab 33B shRNA (h) Lentiviral Particles: sc-88899-V and Rab 33B shRNA (m) Lentiviral Particles: sc-152638-V.

Molecular Weight of Rab 33B: 26 kDa.

## 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<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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<sup>™</sup> Mounting Medium: sc-24941.

## RESEARCH USE

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

## PROTOCOLS

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



Try **Rab 33A/B (D-12): sc-271199** or **Rab 33B (RR-3): sc-81920**, our highly recommended monoclonal alternatives to Rab 33B (C-14).