

# Rab 33A/B (D-12): sc-271199

## 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 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 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 is believed to participate in intra-Golgi transport. Rab 33A is predominantly expressed in CD8<sup>+</sup> T cells and is involved in tuberculosis (TB) processes.

## REFERENCES

- 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.
- 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.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 605950. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Junutula, J.R., et al. 2004. Rab14 is involved in membrane trafficking between the Golgi complex and endosomes. *Mol. Biol. Cell* 15: 2218-2229.

## CHROMOSOMAL LOCATION

Genetic locus: RAB33A (human) mapping to Xq26.1, RAB33B (human) mapping to 4q31.1; Rab33a (mouse) mapping to X A4, Rab33b (mouse) mapping to 3 C.

## SOURCE

Rab 33A/B (D-12) is a mouse monoclonal antibody raised against amino acids 35-75 mapping near the N-terminus of Rab 33A of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Rab 33A/B (D-12) is available conjugated to agarose (sc-271199 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271199 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271199 PE), fluorescein (sc-271199 FITC), Alexa Fluor® 488 (sc-271199 AF488), Alexa Fluor® 546 (sc-271199 AF546), Alexa Fluor® 594 (sc-271199 AF594) or Alexa Fluor® 647 (sc-271199 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271199 AF680) or Alexa Fluor® 790 (sc-271199 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

Rab 33A/B (D-12) is recommended for detection of Rab 33A and Rab 33B of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], 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).

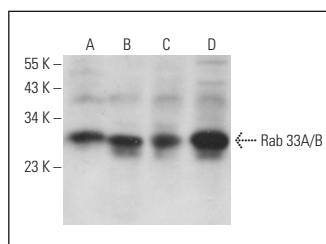
Molecular Weight of Rab 33A/B: 27 kDa.

Positive Controls: HuT 78 whole cell lysate: sc-2208, Jurkat whole cell lysate: sc-2204 or Raji whole cell lysate: sc-364236.

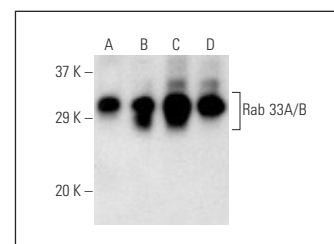
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



Rab 33A/B (D-12): sc-271199. Western blot analysis of Rab 33A/B expression in Jurkat (A), SUP-T1 (B), TK-1 (C) and PC-12 (D) whole cell lysates.



Rab 33A/B (D-12): sc-271199. Western blot analysis of Rab 33A/B expression in U-937 (A), Jurkat (B), HuT 78 (C) and Raji (D) whole cell lysates.

## SELECT PRODUCT CITATIONS

- Bartusch, C., et al. 2017. Rab33B controls hepatitis B virus assembly by regulating core membrane association and nucleocapsid processing. *Viruses* 9: 157.

## STORAGE

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

## RESEARCH USE

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

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