

# Rab 11A (D-3): sc-166523

## BACKGROUND

The Ras-related superfamily of guanine nucleotide binding proteins, which includes the Ral/Rec, Rap, R-Ras and Rho/Rab subfamilies, exhibit 30-60% homology with Ras p21. Accumulating data suggests an important role for Rab proteins, either in endocytosis or in biosynthetic protein transport. The transport of newly synthesized proteins from the endoplasmic reticulum to various stacks of the Golgi complex and to secretory vesicles involves at each stage the movement of carrier vesicles, a process that appears to involve Rab protein function. The possibility that Rab proteins might also direct the exocytosis from secretory vesicles to the plasma membrane is supported by the observation that in yeast, the SEC4 protein, which is 40% homologous to Rab proteins, is associated with secretory vesicles. Several members of the Rab subfamily have been identified, each of which is found at a particular stage of a membrane transport pathway.

## REFERENCE

1. Zahraoui, A., et al. 1989. The human Rab genes encode a family of GTP-binding proteins related to yeast YPT1 and Sec4 products involved in secretion. *J. Biol. Chem.* 264: 12394-12401.
2. Chavrier, P., et al. 1992. The complexity of the Rab and Rho GTP-binding protein subfamilies revealed by a PCR cloning approach. *Gene* 112: 261-264.
3. Baldini, G., et al. 1992. Cloning of a Rab3 isotype predominately expressed in adipocytes. *Proc. Natl. Acad. Sci. USA* 89: 5049-5052.

## CHROMOSOMAL LOCATION

Genetic locus: RAB11A (human) mapping to 15q22.31; Rab11a (mouse) mapping to 9 C.

## SOURCE

Rab 11A (D-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 170-195 near the C-terminus of Rab 11A of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>3</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Rab 11A (D-3) is available conjugated to either phycoerythrin (sc-166523 PE), Alexa Fluor® 488 (sc-166523 AF488), Alexa Fluor® 546 (sc-166523 AF546) or Alexa Fluor® 647 (sc-166523 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

Blocking peptide available for competition studies, sc-166523 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## STORAGE

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

## APPLICATIONS

Rab 11A (D-3) is recommended for detection of Rab 11A of mouse, rat, human and hamster origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

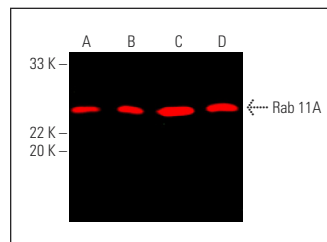
Rab 11A (D-3) is also recommended for detection of Rab 11A in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for Rab 11A siRNA (h): sc-36340, Rab 11A siRNA (m): sc-36341, Rab 11A shRNA Plasmid (h): sc-36340-SH, Rab 11A shRNA Plasmid (m): sc-36341-SH, Rab 11A shRNA (h) Lentiviral Particles: sc-36340-V and Rab 11A shRNA (m) Lentiviral Particles: sc-36341-V.

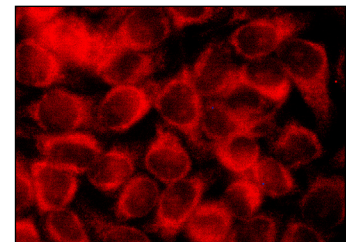
Molecular Weight of Rab 11A: 25 kDa.

Positive Controls: PC-12 cell lysate: sc-2250, HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

## DATA



Rab 11A (D-3): sc-166523. Near-infrared western blot analysis of Rab 11A expression in HeLa (A), Jurkat (B), PC-12 (C) and PC-3 (D) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 790: sc-516181.



Rab 11A (D-3): sc-166523. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

1. Petrini, S., et al. 2013. Monocytes and macrophages as biomarkers for the diagnosis of megalencephalic leukoencephalopathy with subcortical cysts. *Mol. Cell. Neurosci.* 56: 307-321.
2. Alvarez-Arce, A., et al. 2020. Thrombin-activated PAR1 membrane expression is regulated by Rab11a-RCP complex dissociation. *Cell. Signal.* 75: 109748.
3. Fan, X., et al. 2021. Rab11-FIP1 and Rab11-FIP5 regulate plgR/plgA transcytosis through TRIM21-mediated polyubiquitination. *Int. J. Mol. Sci.* 22: 10466.
4. Khan, T.G., et al. 2022. The small GTPase RAB10 regulates endosomal recycling of the LDL receptor and transferrin receptor in hepatocytes. *J. Lipid Res.* 63: 100248.

## RESEARCH USE

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