

# Rab 5 (D-11): sc-46692

## BACKGROUND

The Ras-related superfamily of guanine nucleotide binding proteins, which includes the R-Ras, Rap, Ral/Rec 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. At least eight members of the Rab subfamily have been identified, each of which is found at a particular stage of a membrane transport pathway.

## SOURCE

Rab 5 (D-11) is a mouse monoclonal antibody raised against amino acids 1-215 representing full length Rab 5A of human origin.

## PRODUCT

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

Rab 5 (D-11) is available conjugated to agarose (sc-46692 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-46692 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-46692 PE), fluorescein (sc-46692 FITC), Alexa Fluor® 488 (sc-46692 AF488), Alexa Fluor® 546 (sc-46692 AF546), Alexa Fluor® 594 (sc-46692 AF594) or Alexa Fluor® 647 (sc-46692 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-46692 AF680) or Alexa Fluor® 790 (sc-46692 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

## APPLICATIONS

Rab 5 (D-11) is recommended for detection of Rab 5A, 5B and 5C of mouse, rat and human 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); partially cross reactive with other Rab family members.

Rab 5 (D-11) is also recommended for detection of Rab 5A, 5B and 5C in additional species, including canine.

Molecular Weight of Rab 5: 25 kDa.

Positive Controls: COLO 205 whole cell lysate: sc-364177, Caki-1 cell lysate: sc-2224 or SW480 cell lysate: sc-2219.

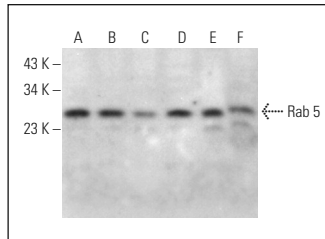
## STORAGE

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

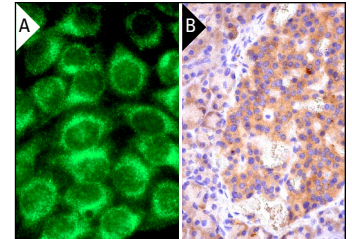
## RESEARCH USE

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

## DATA



Rab 5 (D-11): sc-46692. Western blot analysis of Rab 5 expression in HeLa (A), Caki-1 (B), COLO 205 (C), SW480 (D), C6 (E) and NIH/3T3 (F) whole cell lysates.



Rab 5 (D-11): sc-46692. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of Islets of Langerhans and glandular cells (B).

## SELECT PRODUCT CITATIONS

- Torres, V.A., et al. 2008. Caspase 8 promotes peripheral localization and activation of Rab5. *J. Biol. Chem.* 283: 36280-36289.
- Zimmermann-Meisse, G., et al. 2017. Above and beyond C5a receptor targeting by staphylococcal leucotoxins: retrograde transport of panton-valentine leucocidin and  $\gamma$ -hemolysin. *Toxins* 9: 41.
- Kober, A.C., et al. 2017. Implications of cerebrovascular ATP-binding cassette transporter G1 (ABCG1) and apolipoprotein M in cholesterol transport at the blood-brain barrier. *Biochim. Biophys. Acta* 1862: 573-588.
- Koh, H.J., et al. 2017. *Toxoplasma gondii* GRA7-targeted ASC and PLD1 promote antibacterial host defense via PKC $\alpha$ . *PLoS Pathog.* 13: e1006126.
- Yuan, Q., et al. 2017. PKN1 directs polarized Rab21 vesicle trafficking via RPH3A and is important for neutrophil adhesion and ischemia-reperfusion injury. *Cell Rep.* 19: 2586-2597.
- Roux, A., et al. 2017. Keratin 8/18 regulation of Insulin receptor signaling and trafficking in hepatocytes through a concerted phosphoinositide-dependent Akt and Rab5 modulation. *FASEB J.* 31: 3555-3573.
- Meister, M., et al. 2017. Regulation of cargo transfer between ESCRT-0 and ESCRT-I complexes by flotillin-1 during endosomal sorting of ubiquitinated cargo. *Oncogenesis* 6: e344.
- Mendoza, P.A., et al. 2017. Calpain2 mediates Rab5-driven focal adhesion disassembly and cell migration. *Cell Adh. Migr.* 3: 1-10.
- Torres, P., et al. 2017. The salivary peptide histatin-1 promotes endothelial cell adhesion, migration, and angiogenesis. *FASEB J.* 31: 4946-4958.
- Tapia, R., et al. 2017. EPEC effector EspF promotes Crumbs3 endocytosis and disrupts epithelial cell polarity. *Cell. Microbiol.* E-published.

## PROTOCOLS

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