

Rab 18 (D-5): sc-393168

BACKGROUND

The Ras-related superfamily of guanine nucleotide binding proteins includes the R-Ras, Rap, Ral/Rec and Rho/Rab subfamilies all of which are thought to play an important role in either endocytosis or in biosynthetic protein transport. The process of transporting newly synthesized proteins from the endoplasmic reticulum (ER) 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 18 is a 206 amino acid protein that is lipid-anchored to the cytoplasmic side of the cell membrane and belongs to the Rab subfamily of small GTPases. Expressed ubiquitously, Rab 18 plays a role in apical recycling and endocytosis and is also thought to be involved in protein transport between early endosomes and the plasma membrane.

CHROMOSOMAL LOCATION

Genetic locus: RAB18 (human) mapping to 10p12.1; Rab18 (mouse) mapping to 18 A1.

SOURCE

Rab 18 (D-5) is a mouse monoclonal antibody raised against amino acids 93-206 mapping at the C-terminus of Rab 18 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Rab 18 (D-5) is available conjugated to agarose (sc-393168 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393168 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393168 PE), fluorescein (sc-393168 FITC), Alexa Fluor® 488 (sc-393168 AF488), Alexa Fluor® 546 (sc-393168 AF546), Alexa Fluor® 594 (sc-393168 AF594) or Alexa Fluor® 647 (sc-393168 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393168 AF680) or Alexa Fluor® 790 (sc-393168 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Rab 18 (D-5) is recommended for detection of Rab 18 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Rab 18 (D-5) is also recommended for detection of Rab 18 in additional species, including equine, bovine and porcine.

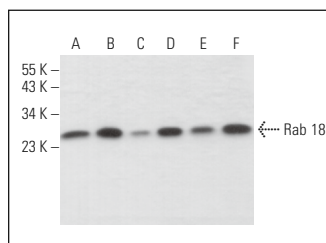
Suitable for use as control antibody for Rab 18 siRNA (h): sc-76316, Rab 18 siRNA (m): sc-76317, Rab 18 shRNA Plasmid (h): sc-76316-SH, Rab 18 shRNA Plasmid (m): sc-76317-SH, Rab 18 shRNA (h) Lentiviral Particles: sc-76316-V and Rab 18 shRNA (m) Lentiviral Particles: sc-76317-V.

Molecular Weight of Rab 18: 23 kDa.

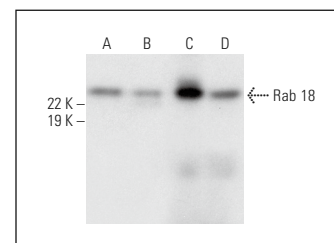
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 18 (D-5): sc-393168. Western blot analysis of Rab 18 expression in HeLa (A), T-47D (B), MCF7 (C), NIH/3T3 (D), J774.A1 (E) and A-10 (F) whole cell lysates.



Rab 18 (D-5): sc-393168. Western blot analysis of Rab 18 expression in Hep G2 (A) and HeLa (B) whole cell lysates and mouse spleen (C) and human spleen (D) tissue extracts.

SELECT PRODUCT CITATIONS

- Kumar, M., et al. 2019. Insulin activates intracellular transport of lipid droplets to release triglycerides from the liver. *J. Cell Biol.* 218: 3697-3713.
- Bekbulat, F., et al. 2020. Rab 18 loss interferes with lipid droplet catabolism and provokes autophagy network adaptations. *J. Mol. Biol.* 432: 1216-1234.
- Zhang, L., et al. 2020. Rab18 binds to classical swine fever virus NS5A and mediates viral replication and assembly in swine umbilical vein endothelial cells. *Virulence* 11: 489-501.
- Ke, Y., et al. 2020. Trappc9 deficiency in mice impairs learning and memory by causing imbalance of dopamine D1 and D2 neurons. *Sci. Adv.* 6: eabb7781.
- Usman, M., et al. 2022. Trappc9 deficiency impairs the plasticity of stem cells. *Int. J. Mol. Sci.* 23: 4900.
- Kamerkar, S., et al. 2022. Metabolic and immune-sensitive contacts between lipid droplets and endoplasmic reticulum reconstituted *in vitro*. *Proc. Natl. Acad. Sci. USA* 119: e2200513119.

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.