

Rab 7 (B-3): sc-376362



The Power to Question

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.

CHROMOSOMAL LOCATION

Genetic locus: RAB7A (human) mapping to 3q21.3, Rab7 (mouse) mapping to 6 D1.

SOURCE

Rab 7 (B-3) is a mouse monoclonal antibody raised against amino acids 158-207 mapping at the C-terminus of Rab 7 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 7 (B-3) is available conjugated to agarose (sc-376362 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376362 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376362 PE), fluorescein (sc-376362 FITC), Alexa Fluor® 488 (sc-376362 AF488), Alexa Fluor® 546 (sc-376362 AF546), Alexa Fluor® 594 (sc-376362 AF594) or Alexa Fluor® 647 (sc-376362 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376362 AF680) or Alexa Fluor® 790 (sc-376362 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Rab 7 (B-3) is recommended for detection of Rab 7 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).

Suitable for use as control antibody for Rab 7 siRNA (h): sc-29460, Rab 7 siRNA (m2): sc-270071, Rab 7 shRNA Plasmid (h): sc-29460-SH, Rab 7 shRNA Plasmid (m2): sc-270071-SH, Rab 7 shRNA (h) Lentiviral Particles: sc-29460-V and Rab 7 shRNA (m2) Lentiviral Particles: sc-270071-V.

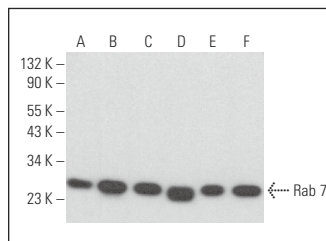
Molecular Weight of Rab 7: 22 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, A-431 whole cell lysate: sc-2201 or HeLa whole cell lysate: sc-2200.

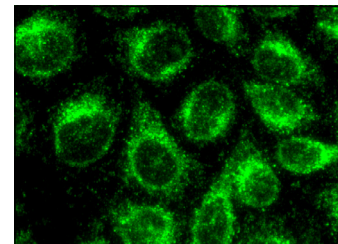
STORAGE

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

DATA



Rab 7 (B-3): sc-376362. Western blot analysis of Rab 7 expression in NIH/3T3 (A), A-431 (B), HeLa (C), U-87 MG (D), HT-1080 (E) and K-562 (F) whole cell lysates.



Rab 7 (B-3): sc-376362. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

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- Hendrickx, G., et al. 2018. Conditional mouse models support the role of SLC39A14 (ZIP14) in hyperostosis cranialis interna and in bone homeostasis. *PLoS Genet.* 14: e1007321.
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- Ren, M., et al. 2019. Extramitochondrial cardiolipin suggests a novel function of mitochondria in spermatogenesis. *J. Cell Biol.* 218: 1491-1502.
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- Hu, J., et al. 2021. TRIM39 deficiency inhibits tumor progression and autophagic flux in colorectal cancer via suppressing the activity of Rab7. *Cell Death Dis.* 12: 391.
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- Somogyi, A., et al. 2023. The synthetic TRPML1 agonist, ML-SA1, rescues Alzheimer-related alterations of the endosomal-autophagic-lysosomal system. *J. Cell Sci.* 136: jcs259875.

RESEARCH USE

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