

Rab 43 (D-12): sc-515460

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 43, also known as ISY1, Rab 41 or Rab 11B, is a widely expressed member of the Rab family of proteins. Localizing to the Golgi complex, Rab 43 is required for retrograde trafficking to the *trans*-Golgi and for the biogenesis and maintenance of the Golgi structure. In addition, Rab 43 is a target of the GTPase activating protein (GAP) RN-tre.

REFERENCES

- Guo, J.H., et al. 2003. Isolation, expression pattern of a novel human RAB gene RAB41 and characterization of its intronless homolog RAB41P. DNA Seq. 14: 431-435.
- Haas, A.K., et al. 2005. A GTPase-activating protein controls Rab5 function in endocytic trafficking. Nat. Cell Biol. 7: 887-893.
- Sklan, E.H., et al. 2007. TBC1D20 is a Rab1 GTPase-activating protein that mediates hepatitis C virus replication. J. Biol. Chem. 282: 36354-36361.
- Fuchs, E., et al. 2007. Specific Rab GTPase-activating proteins define the Shiga toxin and epidermal growth factor uptake pathways. J. Cell Biol. 177: 1133-1143.
- Haas, A.K., et al. 2007. Analysis of GTPase-activating proteins: Rab1 and Rab43 are key Rabs required to maintain a functional Golgi complex in human cells. J. Cell Sci. 120: 2997-3010.
- Morvan, J., et al. 2007. Meeting report: Seventh Annaberg EMBO Workshop "Membrane traffic in the secretory pathway", Goldegg, Austria, 9-14 January 2007. Traffic 8: 1111-1119.

CHROMOSOMAL LOCATION

Genetic locus: RAB43 (human) mapping to 3q21.3; Rab43 (mouse) mapping to 6 D1.

SOURCE

Rab 43 (D-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 39-54 within an internal region of Rab 43 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-515460 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Rab 43 (D-12) is recommended for detection of Rab 43 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 43 siRNA (h): sc-78238, Rab 43 siRNA (m): sc-152648, Rab 43 shRNA Plasmid (h): sc-78238-SH, Rab 43 shRNA Plasmid (m): sc-152648-SH, Rab 43 shRNA (h) Lentiviral Particles: sc-78238-V and Rab 43 shRNA (m) Lentiviral Particles: sc-152648-V.

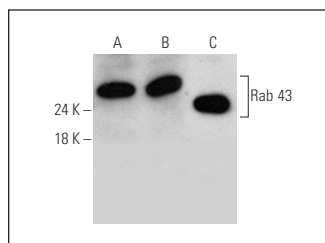
Molecular Weight of Rab 43: 23 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, SW480 cell lysate: sc-2219 or human eye extract: sc-364223.

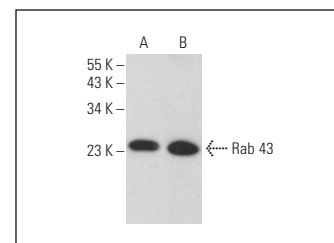
RECOMMENDED SUPPORT REAGENTS

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 L-Agarose: sc-2336 (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 43 (D-12): sc-515460. Western blot analysis of Rab 43 expression in Hep G2 (A) and SW480 (B) whole cell lysates and human eye tissue extract (C).



Rab 43 (D-12): sc-515460. Western blot analysis of Rab 43 expression in COLO 205 (A) and NIH/3T3 (B) whole cell lysates.

SELECT PRODUCT CITATIONS

- Wang, Y., et al. 2022. Extracellular HMGB1 impairs macrophage-mediated efferocytosis by suppressing the Rab43-controlled cell surface transport of CD91. Front. Immunol. 13: 767630.

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.