Rab 43 (QK-07): sc-81923



The Boures to Overtion

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., Chen, L., Chen, S., Liu, X., Saiyin, H., Deng, Q., Zhuang, Y., Wan, B., Yu, L. and Zhao, S.Y. 2003. Isolation, expression pattern of a novel human Rab gene RAB41 and characterization of its intronless homolog Rab 41P. DNA Seq. 14: 431-435.
- Haas, A.K., Fuchs, E., Kopajtich, R. and Barr, F.A. 2005. A GTPase-activating protein controls Rab 5 function in endocytic trafficking. Nat. Cell Biol. 7: 887-893.
- Sklan, E.H., Serrano, R.L., Einav, S., Pfeffer, S.R., Lambright, D.G. and Glenn, J.S. 2007. TBC1D20 is a Rab 1 GTPase-activating protein that mediates hepatitis C virus replication. J. Biol. Chem. 282: 36354-36361.
- Fuchs, E., Haas, A.K., Spooner, R.A., Yoshimura, S., Lord, J.M. and Barr, F.A. 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., Yoshimura, S., Stephens, D.J., Preisinger, C., Fuchs, E. and Barr, F.A. 2007. Analysis of GTPase-activating proteins: Rab 1 and Rab 43 are key Rabs required to maintain a functional Golgi complex in human cells. J. Cell Sci. 120: 2997-3010.
- 6. Morvan, J., Salinas, S. and Neubrand, V.E. 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.

SOURCE

Rab 43 (Ω K-07) is a mouse monoclonal antibody raised against recombinant Rab 43 of human origin.

PRODUCT

Each vial contains 100 μg lgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

Rab 43 (QK-07) is recommended for detection of Rab 43 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

Suitable for use as control antibody for Rab 43 siRNA (h): sc-78238, Rab 43 shRNA Plasmid (h): sc-78238-SH and Rab 43 shRNA (h) Lentiviral Particles: sc-78238-V.

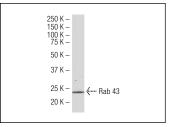
Molecular Weight of Rab 43: 23 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or human salivary gland extract: sc-363762.

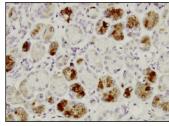
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-lgG κ BP-HRP: sc-516102 or m-lgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz MarkerTM Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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-lgG κ BP-FITC: sc-516140 or m-lgG κ 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 (QK-07): sc-81923. Western blot analysis of Rab 43 expression in Hep G2 whole cell lysate.



Rab 43 (QK-07): sc-81923. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human salivary gland tissue showing nuclear and cytoplasmic localization.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.