## 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 (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 7L1, also known as RAB7L, is a 203 amino acid, ubiquitously expressed member of the Rab family of proteins that localizes to the cell membrane. Rab 7 L 1 contains four GTP-binding domains and shares $35 \%$ identity with Rab 7 and $94 \%$ identity with the rat protein Rab 29. In addition, Rab 7L1 is often used as a marker of T cells.

## REFERENCES

1. Shimizu, F., Katagiri, T., Suzuki, M., Watanabe, T.K., Okuno, S., Kuga, Y., Nagata, M., Fujiwara, T., Nakamura, Y. and Takahashi, E. 1997. Cloning and chromosome assignment to 1q32 of a human cDNA (RAB7L1) encoding a small GTP-binding protein, a member of the RAS superfamily. Cytogenet. Cell Genet. 77: 261-263.
2. Online Mendelian Inheritance in Man, OMIM ${ }^{\text {TM }}$. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 603949. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Middleton, R., Aldenhoven, J., Chen, Y., Backofen, B. and Moran, C. 2003. Improving the comparative map of porcine chromosome 9 with respect to human chromosomes 1, 7 and 11. Cytogenet. Genome Res. 102: 128-132.
4. Helip-Wooley, A. and Thoene, J.G. 2004. Sucrose-induced vacuolation results in increased expression of cholesterol biosynthesis and lysosomal genes. Exp. Cell Res. 292: 89-8100.
5. Gurkan, C., Lapp, H., Alory, C., Su, A.I., Hogenesch, J.B. and Balch, W.E. 2005. Large-scale profiling of Rab GTPase trafficking networks: the membrome. Mol. Biol. Cell 16: 3847-3864.
6. Deonarine, K., Panelli, M.C., Stashower, M.E., Jin, P., Smith, K., Slade, H.B., Norwood, C., Wang, E., Marincola, F.M. and Stroncek, D.F. 2007. Gene expression profiling of cutaneous wound healing. J. Transl. Med. 5: 11.

## CHROMOSOMAL LOCATION

Genetic locus: RAB7L1 (human) mapping to 1q32.1; Rab7l1 (mouse) mapping to 1 E 4 .

## SOURCE

Rab 7 L 1 (31-E) is a mouse monoclonal antibody raised against recombinant Rab 7L1 of human origin.

## PRODUCT

Each vial contains $100 \mu \mathrm{~g} \operatorname{lgG}_{2 b}$ kappa light chain in 1.0 ml of PBS with $<0.1 \%$ sodium azide and $0.1 \%$ gelatin.

## APPLICATIONS

Rab $7 \mathrm{~L} 1(31-\mathrm{E})$ is recommended for detection of Rab 7 L 1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 $\mu \mathrm{g}$ per $100-500 \mu \mathrm{~g}$ of total protein ( 1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).
Suitable for use as control antibody for Rab 7L1 siRNA (h): sc-88818, Rab 31 siRNA (m): sc-152635, Rab 7L1 shRNA Plasmid (h): sc-88818-SH, Rab 31 shRNA Plasmid (m): sc-152635-SH, Rab 7L1 shRNA (h) Lentiviral Particles: sc-88818-V and Rab 31 shRNA (m) Lentiviral Particles: sc-152635-V.

Molecular Weight of Rab 7L1: 23 kDa .
Positive Controls: Jurkat whole cell lysate: sc-2204 or Rab $7 \mathrm{L1}$ (m2): 293T Lysate: sc-122915.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-lgGк BP-HRP: sc-516102 or m-lgGк 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).

## DATA



## STORAGE

Store at $4^{\circ} \mathrm{C},{ }^{* *}$ 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.

## PROTOCOLS

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

