

#7622 Store at -20°C

Rabex-5 (D21F12) Rabbit mAb


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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP	H M R	Endogenous	60-80	Rabbit IgG	#Q9UJ41	27342

Product Usage Information

Application

Western Blotting
Immunoprecipitation

Dilution

1:1000
1:100

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity / Sensitivity

Rabex-5 (D21F12) Rabbit mAb recognizes endogenous levels of total Rabex-5 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human Rabex-5 protein.

Background

Rabex-5, also called RabGEF1 and RAP1, was identified as a guanine nucleotide exchange factor (GEF) for Rab5, a member of the Ras superfamily of small Rab GTPases (1). Rabex-5 generates the GTP-bound active form of Rab5 and forms a tight association with its effector protein Rabaptin-5 (2). This complex localizes to endosomal membranes where it functions as a key regulator of vesicular trafficking during early endocytosis (3,4). Rabex-5 is also monoubiquitinated and has ubiquitin ligase activity that regulates its recruitment to early endosomes (5,6). The conformational change between Rab5 GTP/GDP states is essential for its biological function as a rate limiting regulator at multiple steps during endocytosis (5). Through its control of endosomal trafficking and endocytosis, Rabex-5 has been shown to negatively regulate NGF-mediated neurite outgrowth (7) as well as FcεRI-dependent mast cell activation (8).

Background References

1. Horiuchi, H. et al. (1997) *Cell* 90, 1149-59.
2. Lippé, R. et al. (2001) *Mol Biol Cell* 12, 2219-28.
3. Zerial, M. and McBride, H. (2001) *Nat Rev Mol Cell Biol* 2, 107-17.
4. van der Bliek, A.M. (2005) *Nat Cell Biol* 7, 548-50.
5. Mattera, R. et al. (2006) *J Biol Chem* 281, 6874-83.
6. Mattera, R. and Bonifacino, J.S. (2008) *EMBO J* 27, 2484-94.
7. Liu, J. et al. (2007) *Mol Biol Cell* 18, 1375-84.
8. Tam, S.Y. et al. (2004) *Nat Immunol* 5, 844-52.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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