

#36067 Store at -20°C

RanGAP1 (D2T7T) Rabbit mAb

**Cell Signaling**
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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP, eCLIP	H M R Mk	Endogenous	68, 82	Rabbit IgG	#P46060	5905

Product Usage Information

Application

Western Blotting
Immunoprecipitation
eCLIP

Dilution

1:1000
1:100
1:200

For more information about eCLIP and the RBP-eCLIP kit, please visit Eclipse Bioinnovations.

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

RanGAP1 (D2T7T) Rabbit mAb recognizes endogenous levels of total RanGAP1 protein. This antibody detects unmodified and SUMO-1 modified RanGAP1 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human RanGAP1 protein.

Background

Ran GTPase activating protein 1 (RanGAP1) regulates GTP hydrolysis by Ran, which is required for the ability of Ran to regulate nucleocytoplasmic shuttling (1). A significant fraction of cellular RanGAP1 is covalently modified by SUMO-1, which is required for relocalization of RanGAP1 from the cytoplasm to the nuclear pore complex and the mitotic spindle (2-5). Research studies demonstrate that RanGAP1 sumoylation is required for stable association of RanGAP1 with RanBP2. Together with the SUMO-conjugating enzyme UBC9/UBE2L, RanGAP1 and RanBP2 are part of a SUMO E3 ligase complex that is implicated in regulating nucleocytoplasmic protein trafficking (6-8). Phosphorylation of RanGAP1 occurs in a cell-cycle-dependent manner and may play a role in regulating RanGAP1 catalytic activity (9,10).

Background References

1. Bischoff, F.R. et al. (1994) *Proc Natl Acad Sci U S A* 91, 2587-91.
2. Mahajan, R. et al. (1997) *Cell* 88, 97-107.
3. Matunis, M.J. et al. (1998) *J Cell Biol* 140, 499-509.
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5. Joseph, J. et al. (2002) *J Cell Biol* 156, 595-602.
6. Hutten, S. et al. (2008) *Mol Biol Cell* 19, 2300-10.
7. Werner, A. et al. (2012) *Mol Cell* 46, 287-98.
8. Zhu, S. et al. (2009) *Mol Cell* 33, 570-80.
9. Swaminathan, S. et al. (2004) *J Cell Biol* 164, 965-71.
10. Takeda, E. et al. (2005) *Cell Struct Funct* 30, 69-80.

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 **eCLIP:** eCLIP

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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