Revision 5

Store at -20C

#12668

Reptin/RuvBL2 (D8N3J) Rabbit mAb

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, W-S	H M R Mk	Endogenous	48	Rabbit IgG	#Q9Y230	10856

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Simple Western™	1:10 - 1:50

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

Reptin/RuvBL2 (D8N3J) Rabbit mAb recognizes endogenous levels of total Reptin/RuvBL2 protein.

Species predicted to react based on 100% sequence homology

Hamster, Xenopus, Zebrafish, Bovine, Dog, Pig, Guinea Pig, Rabbit

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly263 of human Reptin/RuvBL2 protein.

Background

Reptin/RuvBL2 and Pontin/RuvBL1 are closely related members of the AAA+ (ATPase associated with diverse cellular activities) superfamily of proteins, and are putatively homologous to bacterial RuvB proteins that drive branch migration of Holliday junctions (1). Reptin and Pontin function together as essential components of chromatin remodeling and modification complexes, such as INO80, TIP60, SRCAP, and Uri1, which play key roles in regulating gene transcription (1,2). In their capacity as essential transcriptional co-regulators, Reptin and Pontin have both been implicated in oncogenic transformations, including those driven by c-Myc, β-catenin, and E1A (2-7).
Reptin plays a role in modulating cellular responses to hypoxia. Hypoxia induced methylation of Reptin by the methyltransferase G9a leads to its recruitment to hypoxia responsive promoters, where it negatively regulates transcription of these genes (8). In addition to transcriptional regulatory roles, Reptin also participates in the telomerase biogenesis processes as part of the telomerase complex. Reptin is involved in DNA damage response as part of the TIP60 acetyltransferase complex that stimulates ATM kinase activity necessary for phosphorylation of proteins involved in both checkpoint activation and DNA repair (9,10).

Background References

1. Jha, S. and Dutta, A. (2009) *Mol Cell* 34, 521-33.
2. Gallant, P. (2007) *Trends Cell Biol* 17, 187-92.
3. Huber, O. et al. (2008) *Cancer Res* 68, 6873-6.
4. Kim, J.H. et al. (2005) *Nature* 434, 921-6.
5. Bauer, A. et al. (2000) *EMBO J* 19, 6121-30.
6. Wood, M.A. et al. (2000) *Mol Cell* 5, 321-30.
7. Dugan, K.A. et al. (2002) *Oncogene* 21, 5835-43.
8. Lee, J.S. et al. (2010) *Mol Cell* 39, 71-85.
9. Venteicher, A.S. et al. (2008) *Cell* 132, 945-57.
10. Sun, Y. et al. (2010) *Cell Cycle* 9, 930-6.

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

W: Western Blotting **W-S:** Simple Western™

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

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