Revision 1

#41787 Store at -20C

RYBP (D8J7W) Rabbit mAb

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP	H M R Mk	Endogenous	32	Rabbit IgG	#Q8N488	23429

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:200

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

RYBP (D8J7W) Rabbit mAb recognizes endogenous levels of total RYBP protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with recombinant protein specific to the amino terminus of human RYBP protein.

Background

Ring1 and YY1-binding protein (RYBP) is a widely expressed nuclear protein that functions as a modulator of Ring1A/Ring1B-dependent histone H2A monoubiquitylation (1-3). Ring1A and Ring1B proteins function as the catalytic core subunits of polyclomb repressor complex 1 (PRC1), which acts to repress gene expression in part through monoubiquitination of histone H2A on Lys119 (4). By binding to both the YY1 DNA-binding transcription factor and Ring1A/Ring1B, RYPB is able to recruit the PRC1 complex to target loci independent of prior tri-methylation of histone H3 Lys27 by the EZH2-dependent PRC2 complex (2,3). RYBP also binds monoubiquitinated H2A Lys119 and may act to stabilize or spread binding of PRC1 across large domains of repressed chromatin (5). In addition, RYBP directly stimulates the ubiquitination activity of Ring1A/Ring1B and is required for proper differentiation of stem cells along multiple cell lineages (2,3,6,7). RYBP has also been shown to bind MDM2 and block ubiquitination and degradation of p53, leading to cell cycle arrest and apoptosis in response to DNA damage (8). Many studies demonstrate that RYBP functions as a tumor suppressor protein. RYBP expression is decreased in multiple cancers, including non-small cell lung cancer, hepatocellular carcinoma, and glioblastoma with decreased expression correlating with metastasis and poor prognosis (8-11).

Background References

1. García, E. et al. (1999) *EMBO J* 18, 3404-18.
2. Tavares, L. et al. (2012) *Cell* 148, 664-78.
3. Rose, N.R. et al. (2016) *Elife* 5, e18591.
4. Cao, R. et al. (2005) *Mol Cell* 20, 845-54.
5. Arrigoni, R. et al. (2006) *FEBS Lett* 580, 6233-41.
6. Kovacs, G. et al. (2016) *Stem Cells Int* 2016, 4034620.
7. Ujhelly, O. et al. (2015) *Stem Cells Dev* 24, 2193-205.
8. Chen, D. et al. (2009) *EMBO Rep* 10, 166-72.
9. Voruganti, S. et al. (2015) *Cancer Lett* 369, 386-95.
10. Wang, W. et al. (2014) *Oncotarget* 5, 11604-19.
11. Li, G. et al. (2013) *PLoS One* 8, e80970.

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 nonfat dry milk, 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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