

**RBBP5 (D3I6P) Rabbit mAb**

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

<b>Applications:</b> W, IP, ChIP, C&R, C&T	<b>Reactivity:</b> H M R Mk	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 70	<b>Source/Isotype:</b> Rabbit IgG	<b>UniProt ID:</b> #Q15291	<b>Entrez-Gene Id:</b> 5929
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**Product Usage Information**

For optimal ChIP results, use 10  $\mu$ l of antibody and 10  $\mu$ g of chromatin (approximately  $4 \times 10^6$  cells) per IP. This antibody has been validated using SimpleChIP<sup>®</sup> Enzymatic Chromatin IP Kits.

The CUT&RUN dilution was determined using CUT&RUN Assay Kit #86652.

The CUT&Tag dilution was determined using CUT&Tag Assay Kit #77552.

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50
Chromatin IP	1:50
CUT&RUN	1:50
CUT&Tag	1:50

**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100  $\mu$ g/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at  $-20^{\circ}\text{C}$ . Do not aliquot the antibody.

**Specificity/Sensitivity**

RBBP5 (D3I6P) Rabbit mAb recognizes endogenous levels of total RBBP5 protein.

**Species predicted to react based on 100% sequence homology**

Chicken, Xenopus, Bovine, Horse

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Val408 of human RBBP5 protein.

**Background**

The Set1 histone methyltransferase protein was first identified in yeast as part of the Set1/COMPASS histone methyltransferase complex, which methylates histone H3 at Lys4 and functions as a transcriptional co-activator (1). While yeast contain only one known Set1 protein, six Set1-related proteins exist in mammals: SET1A, SET1B, MLL1, MLL2, MLL3, and MLL4, all of which assemble into COMPASS-like complexes and methylate histone H3 at Lys4 (2,3). These Set1-related proteins are each found in distinct protein complexes, all of which share the common subunits WDR5, RBBP5, ASH2L, CXXC1 and DPY30. These subunits are required for proper complex assembly and modulation of histone methyltransferase activity (2-6). MLL1 and MLL2 complexes contain the additional protein subunit, menin (6). Like yeast Set1, all six Set1-related mammalian proteins methylate histone H3 at Lys4 (2-6). MLL translocations are found in a large number of hematological malignancies, suggesting that Set1/COMPASS histone methyltransferase complexes play a critical role in leukemogenesis (6).

**Background References**

1. Miller, T. et al. (2001) *Proc Natl Acad Sci USA* 98, 12902-7.
2. Shilatifard, A. (2008) *Curr Opin Cell Biol* 20, 341-8.
3. Tenney, K. and Shilatifard, A. (2005) *J Cell Biochem* 95, 429-36.
4. Lee, J.H. and Skalnik, D.G. (2005) *J Biol Chem* 280, 41725-31.
5. Lee, J.H. et al. (2007) *J Biol Chem* 282, 13419-28.
6. Hughes, C.M. et al. (2004) *Mol Cell* 13, 587-97.

**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<sup>®</sup> 20 at  $4^{\circ}\text{C}$  with gentle shaking, overnight.

**Applications Key**

**W:** Western Blotting **IP:** Immunoprecipitation **ChIP:** Chromatin IP **C&R:** CUT&RUN **C&T:** CUT&Tag

## Cross-Reactivity Key

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

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