PRODUCT INFORMATION

RbBP5 (human, recombinant)

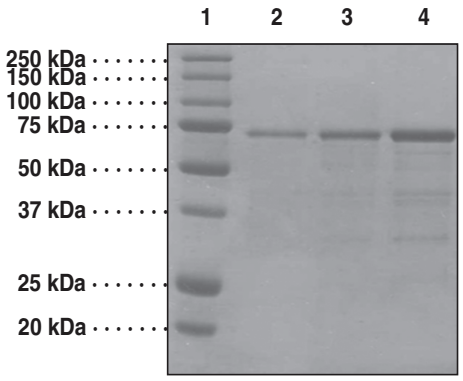
Item No. 10947

Overview and Properties

Synonyms:	RBQ3, Retinoblastoma binding Protein 5, SWD1, Set1c WD40 repeat protein, homolog
Source:	Recombinant protein expressed in *E. coli*
Amino Acids:	2-538 (full length)
Uniprot No.:	Q15291
Molecular Weight:	72.9 kDa
Storage:	-80°C (as supplied)
Stability:	≥6 months
Purity:	***batch specific*** (≥80% estimated by SDS-PAGE)
Supplied in:	50 mM Tris, pH 8.0, containing 150 mM sodium chloride and 20% glycerol
Endotoxin Testing:	< 1.0 EU/µg, determined by the LAL endotoxin assay
Protein Concentration:	***batch specific*** mg/ml

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Image



Lane 1: MW Markers
Lane 2: RbBP5 (1 µg)
Lane 3: RbBP5 (2 µg)
Lane 4: RbBP5 (5 µg)

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PRODUCT INFORMATION

Description

Retinoblastoma-binding protein 5 (RbBP5) is a ubiquitously expressed nuclear protein that contains WD40 repeat-like domains. RbBP5 binds directly to tumor suppressor retinoblastoma protein (RB) and regulates cell proliferation. Interaction of RbBP5 occurs preferentially with underphosphorylated RB through the E1A-binding pocket B.[1] RbBP5 is also an important component of the multi-subunit SET1 lysine methyltransferase protein complex, which includes MLL1.[2] RbBP5 interacts directly with WDR5 contributing to the activation of the MLL1 core protein complex.[3-5] MLL1-4 protein complexes catalyze the di- and trimethylation of histone H3 at lysine 4 (H3K4me2/me3), leading to the maintenance of global H3K4 trimethylation.[6]

References

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3. Avdic, V., Zhang, P., Lanouette, S., *et al*. Structural and biochemical insights into MLL1 core complex assembly. *Structure* **19(1)**, 101-108 (2011).
4. Odho, Z., Southall, S.M., and Wilson, J.R. Characterization of a novel WDR5-binding site that recruits RbBP5 through a conserved motif to enhance methylation of histone H3 lysine 4 by mixed lineage leukemia protein-1. *J. Biol. Chem.* **285(43)**, 32967-76 (2010).
5. Dou, Y., Milne, T.A., Ruthenburg, A.J., *et al*. Regulation of MLL1 H3K4 methyltransferase activity by its core components. *Nat. Struct. Mol. Biol.* **13(8)**, 713-9 (2006).
6. Wang, P., Lin, C., Smith, E.R., *et al*. Global analysis of H3K4 methylation defines MLL family member targets and points to a role for MLL1-mediated H3K4 methylation in the regulation of transcriptional initiation by RNA polymerase II. *Mol. Cell. Biol.* **29(22)**, 6074-85 (2009).

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