PRODUCT INFORMATION

WDR5 (human, recombinant)

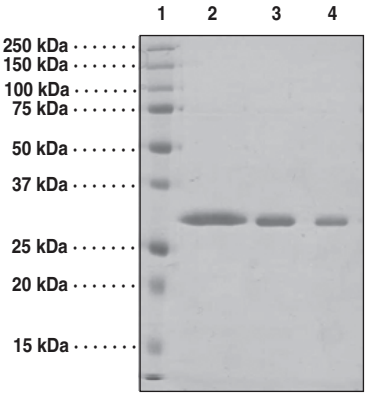
Item No. 10944

Overview and Properties

Synonyms:	BIG3, BMP2-induced 3-kb Gene Protein, SWD3, Set1c WD40 repeat protein, homolog, WD-Repeat Protein 5
Source:	Recombinant protein expressed in *E. coli*. An N-terminal hexahistidine tag and SUMOpro tag were removed by cleavage with SUMO Protease 1 (Ulp1). *SUMOpro and SUMO Protease 1 were used under non-exclusive license from LifeSensors, Inc. www.lifesensors.com.*
Amino Acids:	2-334 (full length)
Molecular Weight:	34.4 kDa
Storage:	-80°C (as supplied); avoid freeze/thaw cycles by aliquoting protein
Stability:	≥1 year
Purity:	***batch specific*** (≥95% estimated by SDS-PAGE)
Supplied in:	50 mM Tris, pH 8.0, with 150 mM sodium chloride and 20% glycerol
Protein Concentration:	***batch specific*** mg/ml
Activity:	***batch specific*** U/ml
Specific Activity:	***batch specific*** U/mg

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

Image



Lane 1: MW Markers
Lane 2: WDR5 (4 µg)
Lane 3: WDR5 (2 µg)
Lane 4: WDR5 (1 µg)

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Description

WD repeats are motifs of approximately 40 amino acids typically terminating in conserved tryptophan and aspartate residues. Several WD40 repeats combine to form the structural WD domain. Such an arrangement facilitates protein-protein interactions allowing the formation of multiprotein complexes.[1] Human WDR5 contains seven WD 40 repeats and was originally identified to accelerate osteoblast differentiation.[2] WDR5 has been demonstrated to bind histone H3 by recognizing the first three amino acids of the N-terminal tail.[3] Binding of WDR5 to a conserved arginine-containing motif in MLL-1, the so-called WDR5 interaction ("Win") motif, promotes the assembly and activity of the MLL core complex.[4] Additional interactions have been demonstrated with other components of the human MLL core protein complex, which includes ASH2L and RbBP5.[5,6] MLL1-5 protein complexes catalyze the di- and trimethylation of histone H3 at lysine 4 (H3K4me2/me3), leading to the maintenance of global H3K4 trimethylation.[7]

References

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6. 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).
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