

PRODUCT INFORMATION



DPY-30 (human recombinant)

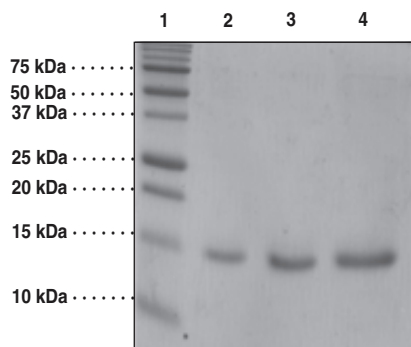
Item No. 11178

Overview and Properties

Synonyms:	DPY-30-like protein, hDPY-30, SAF19
Source:	Active recombinant protein expressed in <i>E. coli</i> . Expressed with an N-terminal SUMOpro tag and used under non-exclusive license from LifeSensors, Inc. www.lifesensors.com .
Amino Acids:	2-99 (full length)
Uniprot No.:	Q9C005
Molecular Weight:	11.2 kDa
Storage:	-80°C (as supplied)
Stability:	≥6 months
Purity:	<i>batch specific</i> (≥95% estimated by SDS-PAGE)
Supplied in:	50 mM Tris, pH 8.0, 100 mM sodium chloride, and 20% glycerol
Protein Concentration:	<i>batch specific</i> mg/ml
Activity:	Activity was demonstrated by monitoring H3 methylation in a radiometric assay of the MLL1/WARD complex (Ash2L, WDR5, RbBP5, MLL1, and DPY-30) (Item No. 10945) using [³ H]-S-adenosylmethionine and HeLa Core Histones (Item No. 11010) as the substrates.

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

Image



Lane 1: MW Markers
Lane 2: DPY-30 (1 µg)
Lane 2: DPY-30 (2 µg)
Lane 2: DPY-30 (4 µg)

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

DPY-30 is a component of the MLL1 methylation complex, which interacts directly with Ash2L.¹ In *C. elegans*, DPY-30 is required for dosage compensation in XX individuals, and its deletion or mutation is lethal. For XO individuals, DPY-30 is required for proper growth and development.^{2,3} DPY-30 is a homodimer in solution, and two monomers interact with one Ash2L monomer.⁴ Addition of DPY-30 to the MLL1, WDR5, RbBP5, and Ash2L complex results in a 2-fold increase in methylation rate, from 300x the MLL1 basal rate to 600x the MLL1 basal rate.⁵

References

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2. Hsu, D.R. and Meyer, B.J. The DPY-30 gene encodes an essential component of the *Caenorhabditis elegans* dosage compensation machinery. *Genetics* **137**, 999-1018 (1994).
3. Hsu, D.R., Chuang, P.-T., and Meyer, B.J. DPY-30, a nuclear protein essential early in embryogenesis for *Caenorhabditis elegans* dosage compensation. *Development* **121**(10), 3323-3334 (1995).
4. Patel, A., Dharmarajan, V., Vought, V.E., *et al.* On the mechanism of multiple lysine methylation by the human mixed lineage leukemia protein-1 (MLL1) core complex. *J. Biol. Chem.* **284**(36), 24242-24256 (2009).
5. Mohan, M., Lin, C., Guest, E., *et al.* Licensed to elongate: A molecular mechanism for MLL-based leukaemogenesis. *Nat. Rev. Cancer* **10**(10), 721-728 (2010).

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