

PRODUCT INFORMATION



PRMT5/MEP50 Complex (human, recombinant)

Item No. 33992

Overview and Properties

Synonyms: Histone-arginine N-methyltransferase PRMT5, IBP72, Jak-binding Protein 1, JBP1, Protein-arginine N-methyltransferase 5, Shk1 Kinase-binding protein 1 Homolog, SKB1 Homolog, 72 kDa ICh-binding Protein

Source: Active recombinant human N-terminal DYKDDDDK-tagged PRMT5 and N-terminal His-tagged MEP50 expressed in insect cells

Amino Acids: 2-2,304 (PRMT5) and 2-2,456 (MEP50)

Uniprot No.: O14744

Molecular Weight: 73 (PRMT5) and 37.5 (MEP50) kDa

Storage: -80°C (as supplied)

Stability: ≥6 months

Purity: *batch specific* (≥89% estimated by SDS-PAGE)

Supplied in: 40 mM Tris-HCl, pH 8.0, with 110 mM sodium chloride, 2.2 mM potassium chloride, 80 µg/ml DYKDDDDK peptide, and 20% glycerol

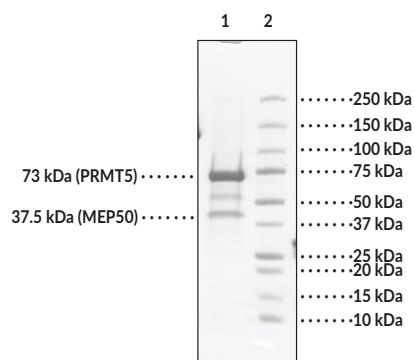
Protein

Concentration: *batch specific* mg/ml

Specific Activity: *batch specific* U/mg

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

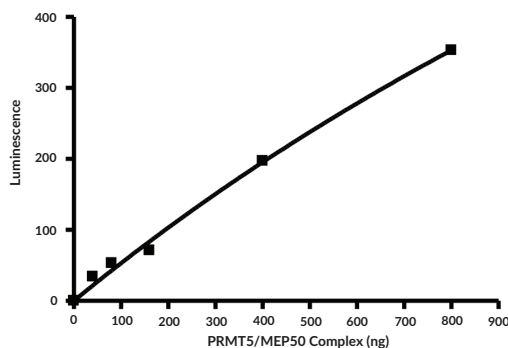
Images



Lane 1: PRMT5/MEP50 Complex (8.25 µg)
Lane 2: MW Markers

SDS-PAGE Analysis of PRMT5 and MEP50.

Representative gel image shown; actual purity may vary between each batch.



PRMT5/MEP50 Complex Specific Activity.

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

Protein-arginine N-methyltransferase 5 (PRMT5) is a type II PRMT and member of the class I S-adenosylmethionine-dependent methyltransferases that symmetrically dimethylates arginine residues in proteins and histones.¹ It is composed of an N-terminal TIM domain and a C-terminal catalytic domain. PRMT5 proteins interact with methylosome 50 (MEP50) proteins primarily via the TIM domain to form a hetero-octameric complex that is more active than PRMT5 alone.² Both PRMT5 and MEP50 are found in a wide variety of somatic and embryonic tissues, including the fetal ovary, fetal heart, and adult retina.³ The PRMT5-MEP50 complex methylates spliceosomal proteins and newly synthesized histone H2A in the cytoplasm and interacts with additional binding partners to regulate transcription through the methylation of NF- κ B and p53 and other transcription factors in the nucleus. PRMT5 and MEP50 expression is increased in a variety of cancers and correlated with lower survival rates in patients with non-small cell lung cancer (NSCLC). Mutations in each gene are also associated with many types of cancer. Cayman's PRMT5/MEP50 Complex (human, recombinant) protein can be used for enzyme activity assays.

References

1. Antonysamy, S. The structure and function of the PRMT5:MEP50 complex. *Macromolecular protein complexes*. Harris, J.R. and Marles-Wright, J., editors, 1st edition, Springer (2017).
2. Antonysamy, S., Bonday, Z., Campbell, R.M., et al. Crystal structure of the human PRMT5:MEP50 complex. *Proc. Natl. Acad. Sci. USA* **109(44)**, 17960-17965 (2012).
3. Stopa, N., Krebs, J.E., and Shechter, D. The PRMT5 arginine methyltransferase: Many roles in development, cancer and beyond. *Cell Mol. Life Sci.* **72(11)**, 2041-2059 (2015).

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