

Recombinant Human PRMP1, His-tagged

Cat. No. PRMT1-59H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Human PRMT1 fused with His-MBP tag at N-terminus produced in <i>E. Coli</i> is a single, non-glycosylated, polypeptide chain containing 750 amino acids and having a molecular mass of 84 kDa. The PRMT1 is purified by proprietary chromatographic techniques.
Species	Human
Source	E.coli
ProteinLength	1-353 a.a.
Description	PRMT1 Methylates (mono & asymmetric dimethylation) the guanidino nitrogens of arginyl residues present in a glycine and arginine-rich domain (may methylate HNRNPA1 and histones). Methylates SUPT5H. The PRMT1 protein functions as a histone methyltransferase specific for H4. PRMT1 is an essential factor in oncogenesis and is a potential novel therapeutic target in cancer. PRMT1-mediated methylation serves as a positive modulator of IR/IRS-1/PI3K pathway and glucose uptake in skeletal muscle cells. PRMT1 arginine-methylates MRE11 therefore it regulates the activity of MRE11-RAD50-NBS1 complex during the intra-S-phase DNA damage checkpoint response. PRMT1 plays a post-translationally part in regulating the transcriptional activity. PRMT1 is found predominantly in the cytoplasm though a fraction of PRMT1 is located in the nucleus.
Amino Acid Sequence	HHHHHHMKI EEGKLVWIN GDKGYNGLAE VGKKFEKDTG IKVTVEHPDK

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LEEKFPQVAA TGDGPDIIFW AHDRFGGYAQ SGLLAEITPD KAFQDKLYPF
 TWDAVRYNGK LIAYPIAVEA LSLIYNKDLL PNPPKTWEEI PALDKELKAK
 GKSALMFNLQ EPYFTWPLIA ADGGYAFKYE NGKYDIKDVG VDNAGAKAGL
 TFLVDLIK NK HMNADTDYSI AEA AFNKGET AMTINGPWAW SNIDTSKVNY
 GVTVLPTFKG QPSKPFVGV L SAGINAASPN KELA KEFLEN YLLTDEGLEA
 VNKDKPLGAV ALKSYEEELA KDPRIATME NAQKGEIMP N IPQMSAFWYA
 VRTAVINAAS GRQTVDEALK DAQTNSSSNN NNNNNNNNLG IEGRGSHMAA
 AEAANCIMEV SCGQAESSEKPN AEDMTSKD YYFDSYAHFG IHEEMLKDEV
 RTLTYRNSMF HNRHLFKDKV VLDVGS GTGI LCMFAAKAGA RKVIGIECSS
 ISDYAVKIVK ANKLDHVVTI IKGKVEEVEL PVEKVDIIS EWMGYCLFYE
 SMLNTVLYAR DKWLAPDGLI FPDRATLYVT AIEDRQYKDY KIHWWENVYG
 FDMSCIKDVA IKEPLVDVVD PKQLVTNACL IKEVDIYTVK VEDLTFTSPF
 CLQVKRNDYV HALVAYFNIE FTRCHKRTGF STSPESPYTH WKQTVFYMED
 YLTVKTGEEI FGTIGMRPNA KNNRDLFTI DLDFKQQLCE LSCSTDYRMR.

Physical Appearance	Sterile Filtered colorless solution.
Purity	Greater than 90.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.
Formulation	The PRMT1 solution (1 mg/ml) contains 40 mM Tris pH 8.0, 100 mM NaCl, 4 mM MgCl ₂ , 2 mM DTT & 40% glycerol.
Unit Definition	One unit will transfer 1pmol of methyl group to synthetic peptide of histone H4 for 10 minutes at 37°C.
Specific Activity	10,000 Units/ml.
Stability	PRMT1 although stable 14°C for 4 weeks, should be stored desiccated below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

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Please prevent freeze-thaw cycles.

GENE INFORMATION

Gene Name	PRMT1 protein arginine methyltransferase 1 [Homo sapiens]
Synonyms	PRMT1; protein arginine methyltransferase 1; ANM1; HCP1; IR1B4; HRMT1L2; HMT1 (hnRNP methyltransferase, S. cerevisiae)-like 2; HMT1 hnRNP methyltransferase-like 2 (S. cerevisiae); Protein arginine N-methyltransferase 1; Interferon receptor 1-bound protein 4; HMT2; EC 2.1.1
Gene ID	3276
mRNA Refseq	NM_001536
Protein Refseq	NP_001527
MIM	602950
UniProt ID	Q99873
Chromosome Location	19q13.3
Function	N-methyltransferase activity; protein binding; protein methyltransferase activity; transferase activity

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