

Recombinant Human DNMT1 Protein, His-Flag-tagged

Cat. No. DNMT1-330H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Full-length Recombinant Human DNMT1 Protein (residues 2-1616 (C-terminus); Genbank Accession # NM_001379) expressed in SF9 Insect Cells with an N-terminal His-tag and a C-terminal Flag-Tag.
Species	Human
Source	Insect Cells
Description	DNA methylation is recognized to play a major role in a number of cellular functions such as embryonic development, genetic imprinting, X chromosome inactivation and the control of gene expression. DNA methylation is generally associated with transcriptional repression. DNA (cytosine-5)-methyltransferase1 (DNMT1) preferentially methylates hemi-methylated DNA, in a CpG context, to maintain the methylation pattern in the new strand of replicated DNA. DNA methylation is coordinated with methylation of histones. Inactivation of DNMT1 causes global demethylation and embryonic lethality. Transcriptional repression by DNMT1 is mediated by direct interaction with HDAC2.
Form	25 µg recombinant DNMT1 protein supplied at a concentration of 0.5 µg/µl in 20 mM Tris-HCl pH 7.5, 150 mM NaCl, 100mM EDTA pH 8, 0.01% NP-40, and 10% glycerol.
Molecular Mass	182 kDa
AA Sequence	MHHHHHHLEPARTAPARVPTLAVPAISLPDDVRRRLKDLERDSLTEKECVKEKLNLL HEFLQTEIKNQLCDLETCLRKEELSEGYLAKVKSLNKLDSLENGAHAYNREVNGR LENGNQARSEARRVGMADANSPKPLSKPRTPRRSKSDGEAKPEPSPSPRITRKST

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RQTTITSHFAKGPAKRKPQEESERAKSDESIKEEDKDQDEKRRRVTSRERVARPLP
 AEEPERAKSGTRTEKEEEERDEKEEKRLRSQTKEPTPKQKLKEEPDREARAGVQADE
 DEDGDEKDEKKHRSQPKDLAAKRRPEEKEPEKVNPKISDEKDEDEKEEKRRKTTPK
 EPTEKKMARAKTVMNSKTHPPKCIQCGQYLLDDPDLKYQHPPDAVDEPQMLTNEK
 LSIFDANESGFESYEALPQHKLTCFSVYCKHGHLCPIDTGLIEKNIELFFSGSAKPIYD
 DDPSLEGGVNGKNLGPINEWWITGFDGGEKALIGFSTSFAEYILMDPSPEYAPIFGL
 MQEKIYISKIVVEFLQSNSDSTYEDLINKIETTVPPSGLNLRFTEDSLLRHAQFVVEQ
 VESYDEAGDSDEQPIFLTPCMRDLIKLAGVTLGQRRRAQARRQTIRHSTREKDRGPTK
 ATTTKLQYQIFDTFFAEQIEKDDREDKENAFKRRRCGVCEVCQQPECGKCKACKDM
 VKFGGSGRSKQACQERRCPNMAMKEADDDEEVDNIPEMPSPKKMHQGGKKKKQN
 KNRISWVGEAVKTDGKKSYYKKVCIDAETLEVGDVSVIPDDSSKPLYLARVTALWE
 DSSNGQMFHAHWFCAGTDTVLGATSDPLELFLVDECEDMQLSYIHSKVVIYKAPS
 ENWAMEGGMDPESLLEGDDGKTYFYQLWYDQDYARFESPPKTQPTEDNKFKFCV
 SCARLAEMRQKEIPRVLEQLEDLDSRVLYYSATKNGILYRVGDGVYLPPEAFTFNIKL
 SSPVKRPRKEPVDEDLYPEHYRKYSYIKGSNLDAPEPYRIGRIKEIFCPKKSNGRPN
 ETDIKIRVNKFYRPENTHKSTPASYHADINLLYWSDEEAVVDFKAVQGRCTVEYGED
 LPECVQVYSMGGPNRFYFLEAYNAKSKSFEDPPNHARSPGNKGKGKGKKGKPKS
 QACEPSEPEIEIKLPKLRTLDVFSGCGGLSEGFHQAGISDTLWAIEMWDPAQAFL
 NNPGSTVFTEDCNILLKLVMAGETTNSRGQRLPQKGDVEMLCGGPPCQGFSGMNR
 FNSRTYSKFKNSLVVSFLSYCDYYRPRFFLLENVRNFVSFKRSMVLKLTLRCLVRMG
 YQCTFGVLQAGQYGAQTRRRRAILAAAPGEKLPLFPEPLHVFAPRACQLSVVVDDK
 KFVSNITRLSSGPFRTITVRDTMSDLPEVRNGASALEISYNGEPQSWFQRQLRGAQY
 QPILRDHICKDMSALVAARMRHIPLAPGSDWRDLNIEVRLSDGTMARKLRYTHHDR
 KNGRSSSGALRGVCSCVEAGKACDPAARQFNTLIPWCLPHTGNRHNHWAGLYGRL
 EWDGFFSTTVTNPEPMGKQGRVLHPEQHRVSVVRECARSQGFDPDYRLFGNILDK
 HRQVGNAVPPPLAKAIGLEIKLCMLAKARESASAKIKEEEAAKDAAADYKDDDDK*

Purity

Purified using FPLC, >98% purity as determined by SDS-PAGE.

Applications

Recombinant DNMT1 is suitable for protein-protein interaction studies, DNA

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	methylation assays, drug screening, structural studies, etc.
Notes	This product is for research use only. Not for use in diagnostic or therapeutic procedures.
Stability	Guaranteed stable for 6 months from date of receipt when stored properly.
Storage	Recombinant proteins in solution are temperature sensitive and must be stored at -80 centigrade to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage.
Concentration	0.5 g/μ

GENE INFORMATION

Gene Name	DNMT1 DNA (cytosine-5-)-methyltransferase 1 [Homo sapiens]
Official Symbol	DNMT1
Synonyms	DNMT1; DNA (cytosine-5-)-methyltransferase 1; DNMT; CXXC9; MCMT; m.Hsa1; DNA MTase Hsa1; AIM; HSN1E; FLJ16293; MGC104992;
Gene ID	1786
mRNA Refseq	NM_001130823
Protein Refseq	NP_001124295
MIM	126375
UniProt ID	P26358

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SDS page of the DNMT1 recombinant protein. The position of the protein of interest is indicated on the right; the marker (in kDa) is shown on the left.

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