

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 HEFLQTEIKNQLCDLETCLRKEELSEEGYLAKVKSLLNKDLSENGAHAYNREVNGR LENGNQARSEARRVGMADANSPPKPLSKPRTPRRSKSDGEAKPEPSPSPRITRKST

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RQTTITSHFAKGPARKRPQEESEERAKSDESISKEEDKDQDEKRRRVTSRERVARPLP
 AEEPERAKSGTRTEKEEEERDEKEEKRLRSQTKEPTPKQKLKEEPDREARAGVQADE
 DEDGDEKDEKKHRSQPKDLAAKRRPEEKEPEKVNQISDEKDEDEKEEKRRKTPK
 EPTEKKMARAKTVMNSKTHPPKCIQCGQYLDDPDLKYGQHPPDAVDEPQMLTNEK
 LSIFDANESGFESYEALPQHKLTCFSVYCKHGHLCPIDTGLIEKNIELFFSGSAKPIYD
 DDPSLEGGVNGKNLGPINEWWITGFDGGEKALIGFSTSFSAEYILMDPSPEYAPIFGL
 MQEKIYISKIVVEFLQSNSDSTYEDLINKIETTVPSPGLNLRFTEDSLLRHAQFVVEQ
 VESYDEAGDSDEQPIFLTPCMRDLIKLAGVTLGQRRRAQARRQTIRHSTREKDRGPTK
 ATTTKLVYQIFDTFFAEQIEKDDREDKENAFKRRRCGVCEVCQQPECGKCKACKDM
 VKFGGSGRSKQACQERRCPNMAMKEADDDEEVDNIPEMPSPKMMHQGKKKKQKQ
 KNRISWVGEAVKTDGKKSYYKVCIDAETLEVGDVSVIPDDSSKPLYLARVTALWE
 DSSNGQMFHAHWFCAGTDTVLGATSDPLELFLVDECEDMQLSYIHSKVKVIYKAPS
 ENWAMEGGMDPESLLEGDDGKTYFYQLWYDQDYARFESPPKTQPTEDNKFKFCV
 SCARLAEMRQKEIPRVLEQLEDLDSRVLYYSATKNGILYRVGDGVYLPPEAFTFNIKL
 SSPVKRPRKEPVDEDLYPEHYRKYSYIKGSNLDAPEPYRIGRIKEIFCPKKSNGRPN
 ETDIKIRVNFYRPENTHKSTPASYHADINLLYWSDEEAVVDFKAVQGRCTVEYGED
 LPECVQVYSMGGPNRFYFLEAYNAKSKSFEDPPNHARSPGNKGGKGGKGGKPKS
 QACEPSEPEIEIKLPKLRTLDFVSGCGGLSEGFHQAGISDTLWAIEMWDPAAQAFRL
 NNPGSTVFTEDCNILLKLVMAGETTNSRGQRLPQKGDVEMLCGGPPCQGFSGMNR
 FNSRTYSKFKNSLVVSFLSYCDYYRPRFFLENVRFVSVFKRSMVLKLTCLRCLVRMG
 YQCTFGVLQAGQYGAQTRRRRAIILAAAPGEKLPFPPEPLHVFAPRACQLSVVVDDK
 KFVSNITRLSSGPFRTITVRDTMSDLPEVRNGASALEISYNGEPQSWFQRQLRGAQY
 QPILRDHICKDMSALVAARMRHIPLAPGSDWRDLNIEVRLSDGTMARKLRYTHHDR
 KNGRSSSGALRGVCSCVEAGKACDPAARQFNTLIPWCLPHTGNRHNHWAGLYGRL
 EWDGFFSTTVTNPEPMGKQGRVLHPEQHRVSVRECARSQGFDPDYRLFGNILDK
 HRQVGNAVPPPLAKAIGLEIKLCMLAKARESASAKIKEEEAAKDAADYKDDDDK*

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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