

Recombinant Human minichromosome maintenance complex component 7, His-tagged

Cat. No. MCM7-427H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	MCM7, 1-414aa, Human, His tag, E.coli
Species	Human
Source	E.coli
ProteinLength	1-414 a.a.
Description	MCM7 is one of the highly conserved mini-chromosome maintenance proteins (MCM) that are essential for the initiation of eukaryotic genome replication. The hexameric protein complex formed by the MCM proteins is a key component of the pre-replication complex (pre_RC) and may be involved in the formation of replication forks and in the recruitment of other DNA replication related proteins. The MCM complex consisting of this protein and MCM2, 4 and 6 proteins possesses DNA helicase activity, and may act as a DNA unwinding enzyme. Cyclin D1-dependent kinase, CDK4, is found to associate with this protein, and may regulate the binding of this protein with the tumorsuppressor protein RB1/RB. Recombinant human MCM7 protein, fused to His-tag at N-terminus, was expressed in E.coli.
Form	Liquid. In 20mM Tris-HCl buffer (pH 8.0) containing 0.4M UREA, 10% glycerol
Molecular Mass	48.6kDa (437aa)
AA Sequence	MGSSHHHHHH SSGLVPRGSH MGSMVVATYT CDQCGAETYQ PIQSPTFMPL

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IMCPSQECQT NRSGGRLYLQ TRGSRFIKFQ EMKMQEHSQ VPGNIPRSI
 TVLVEGENTR IAQPGDHVSV TGIFLPILRT GFRQVVQGLL SETYLEAHRI
 VKMNKSEDDE SGAGELTREE LRQIAEEDFY EKLAASIAPE IYGHEDVKKA
 LLLLLVGGVD QSPRGMKIRG NINICLMGDP GVAKSQLLSY IDRLAPRSQY
 TTGRGSSGVG LTAAVLRDSV SGELTLEGGA LVLADQGVCC IDEFDKMAEA
 DRTAIHEVME QQTISIAGAG ILTTLNARCS ILAAANPAYG RYNPRRSLEQ
 NIQLPAALLS RFDLLWLIQD RPDRDNDLRL AQHITYVHQH SRQPPSQFEP
 LDMKLMRRYI AMCREKQPMV PESLADYITA AYVEMRR

Purity >85% by SDS - PAGE

Storage Can be stored at +4C short term (1-2 weeks). For long term storage, aliquot and store at -20C or -70C. Avoid repeated freezing and thawing cycles.

Concentration 0.5 mg/ml (determined by Bradford assay)

GENE INFORMATION

Gene Name [MCM7 minichromosome maintenance complex component 7 \[Homo sapiens \]](#)

Official Symbol MCM7

Synonyms MCM7; minichromosome maintenance complex component 7; MCM2, MCM7 minichromosome maintenance deficient 7 (S. cerevisiae) , minichromosome maintenance deficient (S. cerevisiae) 7; DNA replication licensing factor MCM7; CDC47; CDC47 homolog; homolog of S. cerevisiae Cdc47; minichromosome maintenance deficient 7; MCM2; P85MCM; P1CDC47; PNAS146; P1.1-MCM3;

Gene ID [4176](#)

mRNA Refseq [NM_005916](#)

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Protein Refseq	NP_005907
MIM	600592
UniProt ID	P33993
Chromosome Location	7q21.3-q22.1
Pathway	Activation of ATR in response to replication stress, organism-specific biosystem; Activation of the pre-replicative complex, organism-specific biosystem; Assembly of the pre-replicative complex, organism-specific biosystem; Cell Cycle, organism-specific biosystem; Cell Cycle Checkpoints, organism-specific biosystem; Cell Cycle, Mitotic, organism-specific biosystem; Cell cycle, organism-specific biosystem;
Function	ATP binding; contributes_to ATP-dependent DNA helicase activity; contributes_to DNA binding; hydrolase activity; nucleotide binding; protein binding; single-stranded DNA binding;

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