

Product datasheet for **RC213729**

MRE11 (NM_005590) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	MRE11 (NM_005590) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	MRE11
Synonyms:	ATLD; HNGS1; MRE11A; MRE11B
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC213729 representing NM_005590
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTGCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGAGTACTGCAGATGCACCTTGATGATGAAAACACATTTAAAATATTAGTTGCAACAGATATTCATCTTG
 GATTTATGGAGAAAGATGCAGTCAGAGGAAATGATACGTTTGAACACTCGATGAAATTTAAGACTTGC
 CCAGGAAAATGAAGTGGATTTTATTTTGTAGGTGGTGATCTTTTTCATGAAAATAGCCCTCAAGGAAA
 ACATTACATACCTGCCTCGAGTTATTAAGAAAATATTGTATGGGTGATCGGCCTGTCCAGTTGAAATTC
 TCAGTGATCAGTCAGTCAACTTTGGTTTTAGTAAGTTCCATGGGTGAACATCAAGATGGCAACCTCAA
 CATTTCATCCAGTGTTTAGTATTTCATGGCAATCATGACGATCCACAGGGGCAGATGCACCTTTGTGCC
 TTGGACATTTTAAAGTTGTGCTGGATTTGTAATCACTTTGGACGTTCAATGTCTGTGGAGAAGATAGACA
 TTAGTCCGGTTTTGCTTCAAAAAGGAAGCACAAGATTGCGCTATATGGTTTAGGATCCATTCCAGATGA
 AAGGCTCTATCGAATGTTTGTCAATAAAAAAGTAACAATGTTGAGACAAAGGAAGATGAGAAGCTTTGG
 TTTAACTTATTTGTGATTCATCAGAACAGGAGTAAACATGGAAGTACTAAGTTCATTCCAGAACAATTTT
 TGGATGACTTCATTGATCTTGTTATCTGGGGCCATGAACATGAGTGTAAAATAGCTCCAACCAAAAATGA
 ACAACAGCTGTTTTATATCTCACAACTGGAAGCTCAGTGGTTACTTCTTTTCCCAGGAGAAGCTGTA
 AAGAAACATGTTGGTTTGTGCTGCGTATTAAGGGGAGGAAGATGAATATGCATAAAATTCCTCTTCACACAG
 TGCGGCAGTTTTTCATGGAGGATATTGTTCTAGCTAATCATCCAGACATTTTTAACCCAGATAATCCTAA
 AGTAACCAAGCCATACAAAGCTTCTGTTTGGAGAAGATTGAAGAAATGCTTGAAATGCTGAACGGGAA
 CGTCTGGGTAATTCTCACCAGCCAGAGAAGCCTTGTACGACTGCGAGTGGACTATAGTGGAGGTTTTG
 AACCTTTCAGTGTCTTCGCTTTAGCCAGAAATTTGTGGATCGGGTAGCTAATCCAAAAGACATTATCCA
 TTTTTTCAGGCATAGAGAACAAAAGGAAAAAACAGGAGAAGAGATCAACTTTGGGAACTTATCACAAAG
 CCTTCAGAAGGAACAACCTTAAAGGGTAGAAGATCTTGTAAAACAGTACTTTCAAACCGCAGAGAAGAAATG
 TGCAGCTCTCACTGCTAACAGAAAAGAGGGATGGGTGAAGCAGTACAAGAAATTTGTGGACAAGGAGGAGAA
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 GATGCCCTCGAAGACAAAATCGATGAGGAGGTACGTCGTTTTCAGAGAAACAGACAAAAAATACTAATG
 AAGAAGATGATGAAGTCCGTGAGGCTATGACCAGGGCCAGAGCACTCAGATCTCAGTCAGAGGAGTCTGC
 TTCTGCCTTTAGTGTGATGACCTTATGAGTATAGATTTAGCAGAACAGATGGCTAATGACTCTGATGAT
 AGCATCTCAGCAGCAACCAACAAAAGGAAGAGGCCGAGGAAGAGGTGGAAGAGGTGGAAGAGGGCAGAAAT
 CAGCATCGAGAGGAGGGTCTCAAAGAGGAAGAGCCTTTAAATCTACAAGCAGCAGCCTTCCCAGAAATGT
 CACTACTAAGAATTATTCAGAGGTGATTGAGGTAGATGAATCAGATGTGGAAGAAGACATTTTTCTACC
 ACTTCAAAGACAGATCAAAGGTGGTCCAGCACATCATCCAGAAAATCATGTCCCAGAGTCAAGTATCGA
 AAGGGTTGATTTTGAATCAAGTGAAGTATGATGATGATGATCCTTTTATGAACACTAGTCTTTAAGAAG
 AAATAGAAGA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC213729 representing NM_005590
 Red=Cloning site Green=Tags(s)

MSTADALDDENTFKILVATDIHLGFMEKDAVRGNDTFVTLDEILRLAQENEVDFILLGGDLFHENKPSRK
 TLHTCLELLRKYCMGDRPVQFEILSDQSVNFGFSKFPWVNYQDGNLNISIPVFSIHGNHDDPTGADALCA
 LDILSCAGFVNHFGSRMSVEKIDISPVLLQKGSTKIALYGLGSIPDERLYRMFVNKKVTMLRPKEDENS
 FNLFVIHQNRSKHGSTNFIPEQFLDDFIDLVIWGHEHECKIAPTKNEQQLFYISQPGSSVVTSLSPGEAV
 KKHVGLLRKGRKMNMHKIPLHTVRQFFMEDIVLANHPDIFNPDNPKVTQAIQSFLEKIEEMLENAERE
 RLGNHQPEKPLVRLRVYDSSGGFEPFVLRFSQKFVDRVANPKDIIHFRHREQEKTGEEINFGKLITK
 PSEGTTLRVEDLVKQYFQTAENKVLQSLLLTERGMGEAVQEFVDKEEKDAIEELVKYQLEKTQRFLKERHI
 DALEDKIDEEVRRFRRETRQKNTNEEDDEVREAMTRARALRSQSEESASAFSADDLMSIDLAEQMANSDD
 SISAATNKGRGRGRRRGGRGQNSASRGGSGRGRAFKSTRQQPSRNVTTKNYSEVIEVDESDEEDIFPT
 TSKTDQRWSSTSSKIMSQSQVSKGVDFESSEDDDDDPFMNTSSLRRNR

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

Cloning Scheme:



ACCN: NM_005590

ORF Size: 2040 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: [NM_005590.4](#)

RefSeq Size: 5164 bp

RefSeq ORF: 2043 bp

Locus ID: 4361

UniProt ID: [P49959](#)

Cytogenetics: 11q21

Domains: Metallophos, Mre11_DNA_bind

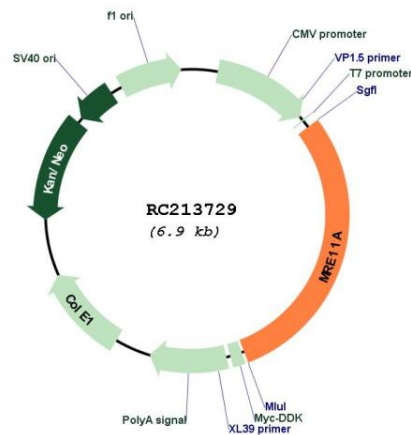
Protein Families: Druggable Genome, Stem cell - Pluripotency

Protein Pathways: Homologous recombination, Non-homologous end-joining

MW: 77.5 kDa

Gene Summary:

This gene encodes a nuclear protein involved in homologous recombination, telomere length maintenance, and DNA double-strand break repair. By itself, the protein has 3' to 5' exonuclease activity and endonuclease activity. The protein forms a complex with the RAD50 homolog; this complex is required for nonhomologous joining of DNA ends and possesses increased single-stranded DNA endonuclease and 3' to 5' exonuclease activities. In conjunction with a DNA ligase, this protein promotes the joining of noncomplementary ends *in vitro* using short homologies near the ends of the DNA fragments. This gene has a pseudogene on chromosome 3. Alternative splicing of this gene results in two transcript variants encoding different isoforms. [provided by RefSeq, Jul 2008]

Product images:


Circular map for RC213729