

Recombinant Human MRE11A

Cat. No. MRE11A-28636TH **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant full length Human Mre11 protein with an N terminal proprietary tag; predicted MWt: 48.77 kDa inclusive of tag.
Species	Human
Source	Wheat Germ
ProteinLength	206 amino acids
Description	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.
Molecular Weight	48.770kDa inclusive of tags
Form	Liquid
Purity	Proprietary Purification

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Storage buffer	pH: 8.00Constituents:0.79% Tris HCl, 0.3% Glutathione
Storage	Shipped on dry ice. Upon delivery aliquot and store at -80oC. Avoid freeze / thaw cycles.
Sequences of amino acids	MSTADALDDENTFKILVATDIHLGFMEKDAVRGNDTFVTL DEILRLAQENEVDFILLG GDLFHENKPSRKTLLHTCLELLR KYCMGDRPVQFEILSDQSVNFGFSKFPWVNYQD GNLNISI PVFSIHGNHDDPTGADALCALDILSCAGFVNHFGRSMSVE KIDISPVLLQK GRTKIALYGLGSIPDERLYRMFVNKKVTM LRPKED
Sequence Similarities	Belongs to the MRE11/RAD32 family.
GENE INFORMATION	
Gene Name	MRE11A MRE11 meiotic recombination 11 homolog A (S. cerevisiae) [Homo sapiens]
Official Symbol	MRE11A
Synonyms	MRE11A; MRE11 meiotic recombination 11 homolog A (S. cerevisiae); meiotic recombination (S. cerevisiae) 11 homolog A , MRE11; double-strand break repair protein MRE11A; AT like disease; ATLD;
Gene ID	4361
mRNA Refseq	NM_005590
Protein Refseq	NP_005581
MIM	600814

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Uniprot ID	P49959
Chromosome Location	11q21
Pathway	Assembly of the RAD50-MRE11-NBS1 complex at DNA double-strand breaks, organism-specific biosystem; BARD1 signaling events, organism-specific biosystem; BRCA1-associated genome surveillance complex (BASC), organism-specific biosystem; DNA Repair, organism-specific biosystem; DNA damage response, organism-specific biosystem;
Function	3-5 exonuclease activity; contributes_to ATP-dependent DNA helicase activity; contributes_to DNA binding; double-stranded DNA binding; endodeoxyribonuclease activity;

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