

## 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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<b>Storage buffer</b>	pH: 8.00 Constituents: 0.79% Tris HCl, 0.3% Glutathione
<b>Storage</b>	Shipped on dry ice. Upon delivery aliquot and store at -80oC. Avoid freeze / thaw cycles.
<b>Sequences of amino acids</b>	MSTADALDDENTFKILVATDIHLGFMEKDAVRGNDFVTL DEILRLAQENEVDFILLG GDLFHENKPSRKTLHTCLELLR KYCMGDRPVQFEILSDQSVNFGFSKFPWVNYQD GNLNISI PVFSIHGNHDDPTGADALCALDILSCAGFVNHFGRSMSVE KIDISPVLLQK GRTKIALYGLGSIPDERLYRMFVNKKVTM LRPKED
<b>Sequence Similarities</b>	Belongs to the MRE11/RAD32 family.

## GENE INFORMATION

<b>Gene Name</b>	MRE11A MRE11 meiotic recombination 11 homolog A ( <i>S. cerevisiae</i> ) [ Homo sapiens ]
<b>Official Symbol</b>	MRE11A
<b>Synonyms</b>	MRE11A; MRE11 meiotic recombination 11 homolog A ( <i>S. cerevisiae</i> ); meiotic recombination ( <i>S. cerevisiae</i> ) 11 homolog A , MRE11; double-strand break repair protein MRE11A; AT like disease; ATLD;
<b>Gene ID</b>	4361
<b>mRNA Refseq</b>	NM_005590
<b>Protein Refseq</b>	NP_005581
<b>MIM</b>	600814

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<b>Uniprot ID</b>	P49959
<b>Chromosome Location</b>	11q21
<b>Pathway</b>	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;
<b>Function</b>	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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