MRE11 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	MRE11, Polyclonal Antibody
Full Product Name	MRE11 (Phospho-Ser264) Polyclonal Antibody
Product Gene Name	anti-MRE11 antibody
Product Synonym Names	MRE11A; HNGS1; MRE11; Double-strand break repair protein MRE11A; Meiotic recombination 11 homolog 1; MRE11 homolog 1; Meiotic recombination 11 homolog A; MRE11 homolog A
Clonality	Polyclonal
Host	Rabbit
Species Reactivity	Human, Mouse, Rat
Form/Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Purity/Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Specificity	Phospho-MRE11 (S264) Polyclonal Antibody detects endogenous levels of MRE11 protein only when phosphorylated at S264.
Preparation and Storage	Store at 4 degree C short term. Aliquot and store at -20 degree C long term. Avoid freeze/thaw cycles.
Molecular Weight	80,593 Da
Chromosome Location	Chromosome: 11; NC_000011.9 (94150466..94227040, complement). Location: 11q21
OMIM	600814
3D Structure	ModBase 3D Structure for P49959
Immunogen	Synthesized peptide derived from human MRE11 around the phosphorylation site of S264.
Product Categories/Family for anti-MRE11 antibody	Primary Antibody
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-MRE11 antibody	Western Blot (WB), ELISA (EIA)
Application Notes for anti-MRE11 antibody	WB: 1:500-1:2000 ELISA: 1:5000
Related Product Information for anti-MRE11 antibody	MBS8585458 is an antibody targeting MRE11. Also known as MRE11 (Phospho-Ser264) Polyclonal Antibody. Reactive in Human, Mouse, Rat. Host: Rabbit.
Other Notes	Small volumes of anti-MRE11 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for MRE11. It may not necessarily be applicable to this product.

NCBI GI #	24234690
NCBI GeneID	4361

NCBI Accession #	NP_005581.2
UniProt Primary Accession #	P49959
UniProt Secondary Accession #	O43475
UniProt Related Accession #	P49959
GenBank Nucleotide #	NM_005590.3
NCBI Official Full Name	double-strand break repair protein MRE11A isoform 2
NCBI Official Synonym Full Names	MRE11 meiotic recombination 11 homolog A (S. cerevisiae)
NCBI Official Symbol	MRE11A
NCBI Official Synonym Symbols	ATLD; HNGS1; MRE11; MRE11B
UniProt Protein Name	Double-strand break repair protein MRE11A
UniProt Synonym Protein Names	Meiotic recombination 11 homolog 1; MRE11 homolog 1; Meiotic recombination 11 homolog A
Protein Family	DNA double-strand break repair protein
UniProt Gene Name	MRE11A
UniProt Synonym Gene Names	HNGS1; MRE11; MRE11 homolog 1
UniProt Entry Name	MRE11_HUMAN
NCBI Protein Information	double-strand break repair protein MRE11A; AT-like disease; MRE11 homolog 1; MRE11 homolog A; endo/exonuclease Mre11; meiotic recombination 11 homolog 1; meiotic recombination 11 homolog A; DNA recombination and repair protein
NCBI Summary for MRE11	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]

UniProt Comments for MRE11	MRE11A: 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. Alternative splicing results in two different isoforms. Protein type: Cell cycle regulation; DNA-binding; Deoxyribonuclease; DNA repair, damage Chromosomal Location of Human Ortholog: 11q21 Cellular Component: nucleoplasm; chromosome, telomeric region; Mre11 complex; cytosol; chromatin; nucleus Molecular Function: protein C-terminus binding; ATP-dependent DNA helicase activity; protein binding; nuclease activity; DNA binding; single-stranded DNA specific endodeoxyribonuclease activity; manganese ion binding; endonuclease activity; double-stranded DNA binding; 3'-5' exonuclease activity; endodeoxyribonuclease activity Biological Process: sister chromatid cohesion; positive regulation of kinase activity; negative regulation of DNA endoreduplication; telomere maintenance via telomerase; DNA repair; regulation of mitotic recombination; DNA catabolic process, endonucleolytic; positive regulation of protein amino acid autophosphorylation; DNA duplex unwinding; double-strand break repair via homologous recombination; double-strand break repair via nonhomologous end joining; DNA recombination; cell proliferation; base-excision repair; nucleotide-excision repair; intra-S DNA damage checkpoint; meiotic recombination; mitotic cell cycle G2/M transition DNA damage checkpoint; double-strand break repair; synapsis; positive regulation of interferon type I production; innate immune response; response to DNA damage stimulus; telomere maintenance Disease: Ataxia-telangiectasia-like Disorder 1
Research Articles on MRE11	**1.** TIS21 regulates DNA double strand break repair and apoptosis via increasing Mre11 methylation.
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