

Rabbit Mre11 Polyclonal Antibody | anti-Mre11 antibody

Phospho-Mre11 (Ser676) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA329917	Rabbit	Human, Mouse, Monkey	ELISA, Immunocytochemistry, Immunofluorescence, Western Blot

PRODUCT SYNONYMS

Mre11; Polyclonal Antibody; Phospho-Mre11 (Ser676) Antibody; AT like disease; Ataxia telangiectasia disorder like; ATLD; DNA recombination and repair protein; Double strand break repair protein MRE11A; Double-strand break repair protein MRE11A; endo/exonuclease Mre11; HNGS1; meiotic recombination (S. cerevisiae) 11 homolog A; Meiotic recombination 11 homolog 1; meiotic recombination 11 homolog A (S. cerevisiae); Meiotic recombination 11 homolog A; MmMRE11A; Mre 11; MRE 11a; MRE 11b; MRE11 homolog 1; MRE11 homolog A; MRE11 meiotic recombination 11 homolog A (S. cerevisiae); MRE11 meiotic recombination 11 homolog A; MRE11_HUMAN; MRE11A; MRE11b; OTTHUMP00000236830; OTTHUMP00000236831; OTTHUMP00000236832; OTTHUMP00000236833; anti-Mre11 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Monkey
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Phospho-Mre11 (Ser676) Antibody detects endogenous levels of Mre11 only when phosphorylated at Ser676.
Purity/Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-Mre11 antibody	ELISA (Peptide ELISA), ICC (Immunocytochemistry), IF (Immunofluorescence), WB (Western Blot)
Immunogen	A synthesized peptide derived from human Mre11 around the phosphorylation site of Ser676.
Conjugation	Unconjugated
Fragment	Fab fragment
Post Translational Modifications	Ubiquitinated following DNA damage. Ubiquitination triggers interaction with UBQLN4, leading to MRE11 removal from chromatin and degradation by the proteasome.
Subunit Structure	Component of the MRN complex composed of two heterodimers RAD50/MRE11 associated with a single NBN. As part of the MRN complex, interacts with MCM9; the interaction recruits the complex to DNA repair sites. Component of the BASC complex, at least composed of BRCA1, MSH2, MSH6, MLH1, ATM, BLM, RAD50, MRE11 and NBN. Found in a complex with TERF2. Interacts with DCLRE1C/Artemis and DCLRE1B/Apollo. Interacts with ATF2. Interacts with EXD2. Interacts with MRNIP. Interacts with SAMHD1; leading to stimulate 3'-5' exonuclease activity. Interacts (when ubiquitinated) with UBQLN4 (via its UBA domain). (Microbial infection) Interacts with herpes simplex virus 1 protein UL12.
Similarity	Belongs to the MRE11/RAD32 family.
Subcellular Location	Nucleus. Chromosome>Telomere. Chromosome. Note: Localizes to discrete nuclear foci after treatment with genotoxic agents.
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



IF (Immunofluorescence)

Staining NIH-3T3 by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary antibody.



WB (Western Blot)

Western blot analysis of Mre11 (Phospho-Ser676) using serum treated COS7 whole cell lysates. -/+ means absence or presence of N peptide (non-phospho peptide) and P peptide (phospho peptide).

ADDITIONAL INFORMATION

Related Product Information for anti-Mre11 antibody	Component of the MRN complex, which plays a central role in double-strand break (DSB) repair, DNA recombination, maintenance of telomere integrity and meiosis. The complex possesses single-strand endonuclease activity and double-strand-specific 3'-5' exonuclease activity, which are provided by MRE11. RAD50 may be required to bind DNA ends and hold them in close proximity. This could facilitate searches for short or long regions of sequence homology in the recombining DNA templates, and may also stimulate the activity of DNA ligases and/or restrict the nuclease activity of MRE11 to prevent nucleolytic degradation past a given point. The complex may also be required for DNA damage signaling via activation of the ATM kinase. In telomeres the MRN complex may modulate t-loop formation.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	24234690
NCBI GeneID	4361
NCBI Accession #	NP_005581.2
NCBI GenBank Nucleotide #	NM_005590.3
UniProt Accession #	P49959; O43475
Molecular Weight	80,593 Da
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
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
UniProt Protein Name	Double-strand break repair protein MRE11A
UniProt Gene Name	MRE11A
UniProt Synonym Gene Names	HNGS1; MRE11; MRE11 homolog 1
UniProt Entry Name	MRE11_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.