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Immunotag™ MRE11 (phospho Ser264) Polyclonal Antibody

Antibody Specification

Catalog No.	ITP0394
Product Description	Immunotag™ MRE11 (phospho Ser264) Polyclonal Antibody
Size	50 µg, 100 µg
Conjugation	HRP, Biotin, FITC, Alexa Fluor® 350, Alexa Fluor® 405, Alexa Fluor® 488, Alexa Fluor® 555, Alexa Fluor® 594, Alexa Fluor® 647
IMPORTANT NOTE	This product is custom manufactured with a lead time of 3-4 weeks. Once in production, this item cannot be cancelled from an order and is not eligible for return.
Target Protein	MRE11 (Ser264)
Clonality	Polyclonal
Storage/Stability	-20°C/1 year
Application	WB,ELISA
Recommended Dilution	Western Blot: 1/500 - 1/2000. ELISA: 1/5000. Not yet tested in other applications.
Concentration	1 mg/ml
Reactive Species	Human,Mouse,Rat
Host Species	Rabbit
Immunogen	Synthesized phospho-peptide around the phosphorylation site of human MRE11 (phospho Ser264)
Specificity	Phospho-MRE11 (S264) Polyclonal Antibody detects endogenous levels of MRE11 protein only when phosphorylated at S264.
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen
Form	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Gene Name	MRE11A
Accession No.	P49959 Q61216 Q9JIM0
Alternate 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

Antibody Specification

Description	MRE11 homolog, double strand break repair nuclease(MRE11) Homo sapiens 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],
Cell Pathway/ Category	Homologous recombination,Non-homologous end-joining,
Protein Expression	Bladder,Brain,Epithelium,Lung,
Subcellular Localization	chromosome, telomeric region,nuclear chromosome, telomeric region,nucleus,nucleoplasm,cytoplasm,cytosol,cell-cell adherens junction,PML body,Mre11 complex,site of double-strand break,
Protein Function	cofactor:Manganese.,disease:Defects in MRE11A are a cause of ataxia telangiectasia-like disorder (ATLD) [MIM:604391]. ATLD is a disease with the same clinical feature than ataxia-telangiectasia but with a somewhat milder clinical course.,disease:Defects in MRE11A may be a cause of breast cancer.,function: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 MRE11A. 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 MRE11A 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.,miscellaneous:In case of infection by adenovirus E4, the MRN complex is inactivated and degraded by viral oncoproteins, thereby preventing concatenation of viral genomes in infected cells.,online information:MRE11A mutation db,PTM:Phosphorylated upon DNA damage, probably by ATM or ATR.,similarity:Belongs to the MRE11/RAD32 family.,subcellular location:Localizes to discrete nuclear foci after treatment with genotoxic agents.,subunit:Component of the MRN complex composed of two heterodimers RAD50/MRE11A associated with a single NBN. Component of the BASC complex, at least composed of BRCA1, MSH2, MSH6, MLH1, ATM, BLM, RAD50, MRE11A and NBN (By similarity). Interacts with DCLRE1C/Artemis.,
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