Product Name: MRE11 (phospho Ser264) Rabbit Polyclonal Antibody
Catalog #: APRab05037

Summary

Production Name	MRE11 (phospho Ser264) Rabbit Polyclonal Antibody
Description	Rabbit Polyclonal Antibody
Host	Rabbit
Application	WB,ELISA
Reactivity	Human,Mouse,Rat

Performance

Conjugation	Unconjugated
Modification	Phospho Antibody
Isotype	IgG
Clonality	Polyclonal
Form	Liquid
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
Buffer	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Purification	Affinity purification

Immunogen

Gene Name	MRE11A
Alternative 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
Gene ID	4361.0
SwissProt ID	P49959.The antiserum was produced against synthesized peptide derived from human MRE11 around the phosphorylation site of Ser264. AA range:230-279

Application

Dilution Ratio	WB 1:500-2000 ELISA 2000-20000
Molecular Weight	80kD

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Background

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],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.,

Research Area

Homologous recombination;Non-homologous end-joining;

Image Data

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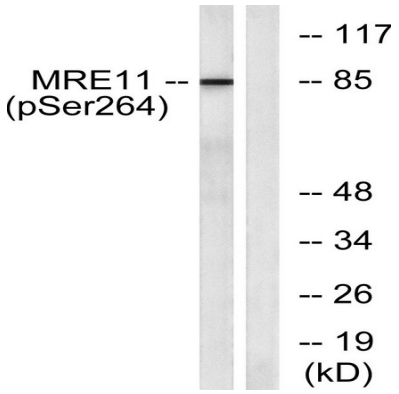
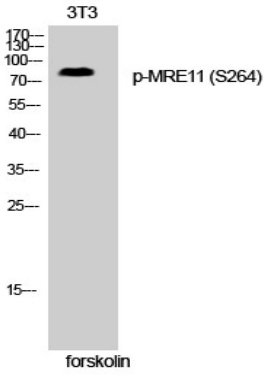


Western blot analysis of lysates from NIH/3T3 cells treated with forskolin 40nM 30 ', using MRE11 (Phospho-Ser264) Antibody. The lane on the right is blocked with the phospho peptide.



Western Blot analysis of 3T3 cells using Phospho-MRE11 (S264) Polyclonal Antibody cells nucleus extracted by Minute TM Cytoplasmic and Nuclear Fractionation kit (SC-003,Inventbiotech,MN,USA).

Note

For research use only.