

**Product Name: MRE11 Rabbit Polyclonal Antibody**  
**Catalog #: APRab14084**



## Summary

<b>Production Name</b>	MRE11 Rabbit Polyclonal Antibody
<b>Description</b>	Rabbit Polyclonal Antibody
<b>Host</b>	Rabbit
<b>Application</b>	WB,IHC
<b>Reactivity</b>	Human,Mouse,Rat,Monkey

## Performance

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

## Immunogen

<b>Gene Name</b>	MRE11A 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
<b>Alternative Names</b>	
<b>Gene ID</b>	4361.0
<b>SwissProt ID</b>	P49959.The antiserum was produced against synthesized peptide derived from human MRE11. AA range:230-279

## Application

<b>Dilution Ratio</b>	WB 1:500 - 1:2000. IHC 1:100 - 1:300. ELISA: 1:20000..
<b>Molecular Weight</b>	80kD

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## Background

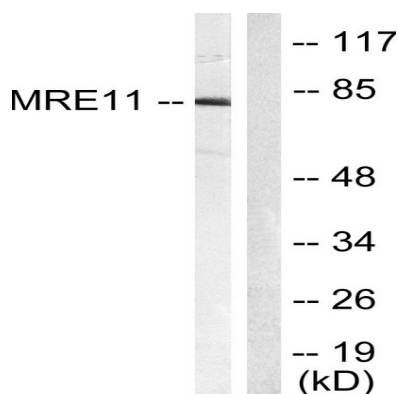
This gene encodes a nuclear protein involved in homologous recombination, telomere length maintenance, and DNA double-strand break repair. By itself, the protein has 3' to 5' exonuclease activity and endonuclease activity. The protein forms a complex with the RAD50 homolog; this complex is required for 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

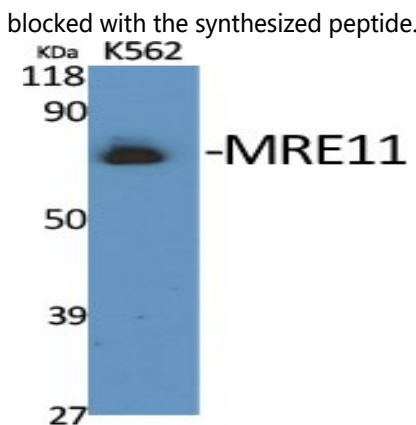
Homologous recombination; Non-homologous end-joining;

## Image Data

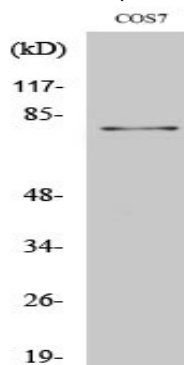
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Western blot analysis of lysates from Jurkat cells, treated with UV 15', using MRE11 Antibody. The lane on the right is blocked with the synthesized peptide.

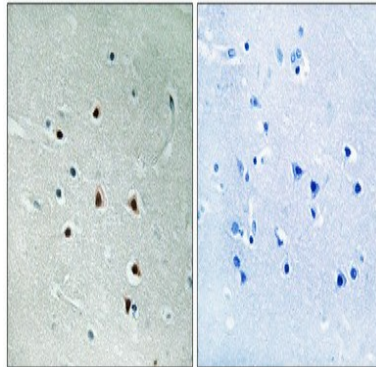


Western Blot analysis of various cells using MRE11 Polyclonal Antibody cells nucleus extracted by Minute TM Cytoplasmic and Nuclear Fractionation kit (SC-003, Inventbiotech, MN, USA).



Western Blot analysis of COS7 cells using MRE11 Polyclonal Antibody cells nucleus extracted by Minute TM Cytoplasmic and Nuclear Fractionation kit (SC-003, Inventbiotech, MN, USA).

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Immunohistochemical analysis of paraffin-embedded Human brain. Antibody was diluted at 1:100 (4°,overnight) . High-pressure and temperature Tris-EDTA,pH8.0 was used for antigen retrieval. Negative contrl (right) obtaned from antibody was pre-absorbed by immunogen peptide.

### **Note**

For research use only.