

**MRE11A / MRE11 Antibody (N-Terminus)**  
**Rabbit Polyclonal Antibody**  
**Catalog # ALS14706****Specification**

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**MRE11A / MRE11 Antibody (N-Terminus) - Product Information**

|                   |                        |
|-------------------|------------------------|
| Application       | IF, WB                 |
| Primary Accession | <a href="#">P49959</a> |
| Reactivity        | Human, Mouse, Rat      |
| Host              | Rabbit                 |
| Clonality         | Polyclonal             |
| Calculated MW     | 81kDa KDa              |

**MRE11A / MRE11 Antibody (N-Terminus) - Additional Information****Gene ID** 4361**Other Names**

Double-strand break repair protein MRE11A, Meiotic recombination 11 homolog 1, MRE11 homolog 1, Meiotic recombination 11 homolog A, MRE11 homolog A, MRE11A, HNGS1, MRE11

**Target/Specificity**

Human MRE11A

**Reconstitution & Storage**

Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles. Store undiluted.

**Precautions**

MRE11A / MRE11 Antibody (N-Terminus) is for research use only and not for use in diagnostic or therapeutic procedures.

**MRE11A / MRE11 Antibody (N-Terminus) - Protein Information****Name** MRE11 ([HGNC:7230](#))**Synonyms** HNGS1, MRE11A**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 (PubMed:<a href="http://www.uniprot.org/citations/9651580" target="\_blank">9651580</a>, PubMed:<a href="http://www.uniprot.org/citations/9590181" target="\_blank">9590181</a>, PubMed:<a href="http://www.uniprot.org/citations/9705271" target="\_blank">9705271</a>, PubMed:<a href="http://www.uniprot.org/citations/11741547" target="\_blank">11741547</a>, PubMed:<a href="http://www.uniprot.org/citations/29670289" target="\_blank">29670289</a>). The complex possesses single-strand endonuclease activity and double-strand- specific 3'-5' exonuclease activity, which are provided by MRE11 (PubMed:<a href="http://www.uniprot.org/citations/9651580" target="\_blank">9651580</a>, PubMed:<a

href="http://www.uniprot.org/citations/9590181" target="\_blank">9590181</a>, PubMed:<a href="http://www.uniprot.org/citations/9705271" target="\_blank">9705271</a>, PubMed:<a href="http://www.uniprot.org/citations/11741547" target="\_blank">11741547</a>, PubMed:<a href="http://www.uniprot.org/citations/29670289" target="\_blank">29670289</a>). RAD50 may be required to bind DNA ends and hold them in close proximity (PubMed:<a href="http://www.uniprot.org/citations/9651580" target="\_blank">9651580</a>, PubMed:<a href="http://www.uniprot.org/citations/9590181" target="\_blank">9590181</a>, PubMed:<a href="http://www.uniprot.org/citations/9705271" target="\_blank">9705271</a>, PubMed:<a href="http://www.uniprot.org/citations/11741547" target="\_blank">11741547</a>, PubMed:<a href="http://www.uniprot.org/citations/29670289" target="\_blank">29670289</a>). 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 (PubMed:<a href="http://www.uniprot.org/citations/9651580" target="\_blank">9651580</a>, PubMed:<a href="http://www.uniprot.org/citations/9590181" target="\_blank">9590181</a>, PubMed:<a href="http://www.uniprot.org/citations/9705271" target="\_blank">9705271</a>, PubMed:<a href="http://www.uniprot.org/citations/11741547" target="\_blank">11741547</a>, PubMed:<a href="http://www.uniprot.org/citations/29670289" target="\_blank">29670289</a>, PubMed:<a href="http://www.uniprot.org/citations/30612738" target="\_blank">30612738</a>). The complex may also be required for DNA damage signaling via activation of the ATM kinase (PubMed:<a href="http://www.uniprot.org/citations/15064416" target="\_blank">15064416</a>). In telomeres the MRN complex may modulate t-loop formation (PubMed:<a href="http://www.uniprot.org/citations/10888888" target="\_blank">10888888</a>).

#### **Cellular Location**

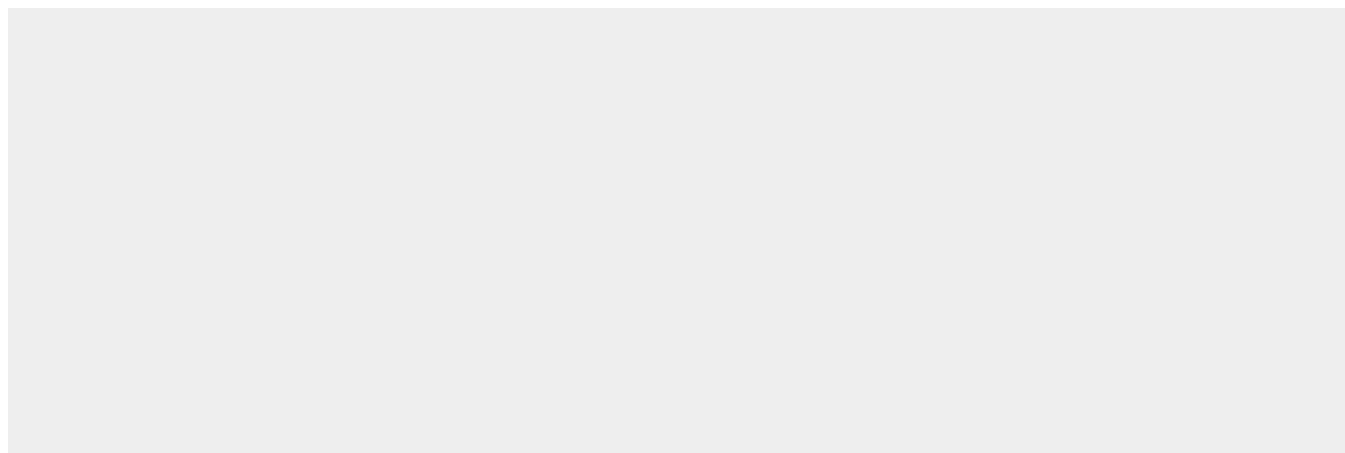
Nucleus. Chromosome, telomere. Chromosome. Note=Localizes to discrete nuclear foci after treatment with genotoxic agents.

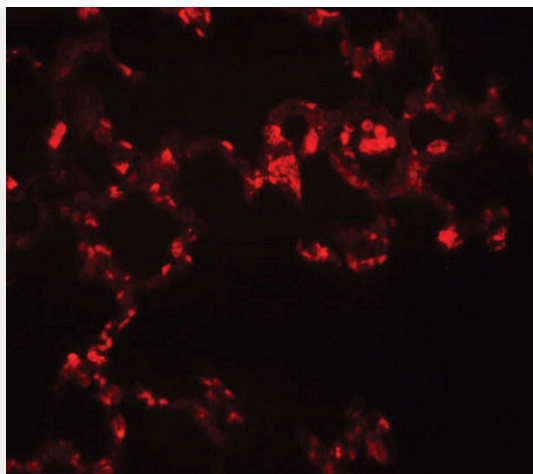
#### **MRE11A / MRE11 Antibody (N-Terminus) - Protocols**

Provided below are standard protocols that you may find useful for product applications.

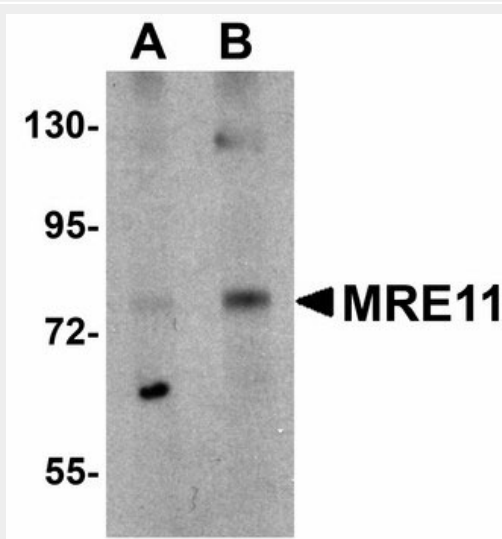
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### **MRE11A / MRE11 Antibody (N-Terminus) - Images**





Immunofluorescence of MRE11 in rat lung tissue with MRE11 antibody at 20 ug/ml.



Western blot of MRE11 in rat lung tissue lysate with MRE11 antibody at (A) 1 and (B) 2 ug/ml.

#### **MRE11A / MRE11 Antibody (N-Terminus) - Background**

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.

#### **MRE11A / MRE11 Antibody (N-Terminus) - References**

- Petrini J.H.J., et al. Genomics 29:80-86(1995).
- Petrini J.H.J., et al. Submitted (NOV-1998) to the EMBL/GenBank/DDBJ databases.
- Chamankhah M., et al. Submitted (SEP-1997) to the EMBL/GenBank/DDBJ databases.
- Paull T.T., et al. Mol. Cell 1:969-979(1998).
- Pitts S.A., et al. Hum. Mol. Genet. 10:1155-1162(2001).