

## Product datasheet for **AP20369PU-M**

### **MRE11 Rabbit Polyclonal Antibody**

#### **Product data:**

Product Type:	Primary Antibodies
Applications:	IHC, WB
Recommended Dilution:	<b>Western blot:</b> 1/500-1/1000. <b>Immunohistochemistry on paraffin sections:</b> 1/50-1/200.
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Specificity:	This antibody detects endogenous levels of MRE11 protein.
Formulation:	Phosphate buffered saline (PBS) with 0.05% sodium azide, approx. pH 7.2 State: Aff - Purified State: Liquid purified Ig fraction
Concentration:	1.0 mg/ml
Purification:	Affinity-chromatography using epitope-specific immunogen; purity is > 95% (by SDS-PAGE)
Conjugation:	Unconjugated
Storage:	Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Predicted Protein Size:	~ 80 kDa
Gene Name:	MRE11 homolog A, double strand break repair nuclease
Database Link:	<a href="#">Entrez Gene 17535 Mouse</a> <a href="#">Entrez Gene 64046 Rat</a> <a href="#">Entrez Gene 4361 Human</a> <a href="#">P49959</a>



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**Background:**

DNA double-strand breaks are generated by ionizing radiation and endogenously produced radicals, and they often are repaired through the RAD52 homologous recombination pathway. The RAD52 family includes RAD51, RAD52, RAD54, RAD54B and MRE11 genes. Rad51 and Rad52 proteins perform the key steps in homologous recombination (HR), including the search for DNA homology and strand exchange, through similar mechanisms. Mre11 functions in both non-homologous end joining, and meiotic HR, and it is essential in mitosis for chromosome maintenance. Rad54 belongs to the SWI2/SNF2 subfamily of ATPases, which includes the DNA helicases involved in replication, recombination, and repair, as it contains seven amino acid sequence motifs that are largely conserved. Rad54 ATPase activity is dependent on double-stranded (ds) DNA, and the ATPase activity of Rad54 is not absolutely required for its DNA repair function, suggesting that these activities occur at distinct regions of the molecule. RAD54B is significantly homologous to the RAD54 recombination gene. Expression of RAD54B is highest in testis and spleen, which are active in both meiotic and mitotic recombination.

**Synonyms:**

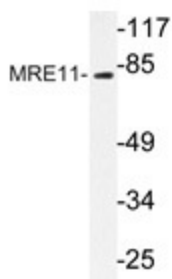
MRE11A, HNGS1, MRE11 homolog 1

**Protein Families:**

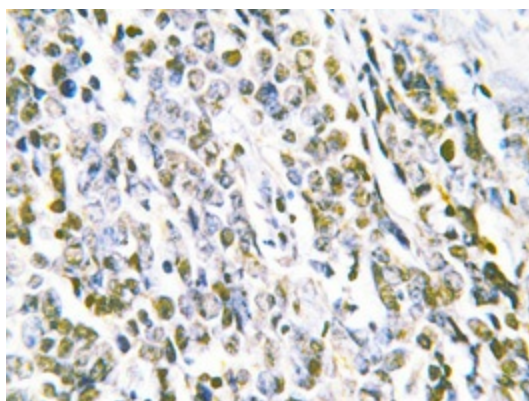
Druggable Genome, Stem cell - Pluripotency

**Protein Pathways:**

Homologous recombination, Non-homologous end-joining

**Product images:**


Western blot analysis of MRE11 antibody (Cat.-No.: [AP20369PU-N]) in extracts from Jurkat cells.



Immunohistochemistry analyzes of MRE11 antibody (Cat.-No.: [AP20369PU-N]) in paraffin-embedded human lung carcinoma tissue.