# Anti-Mre11 Antibody [JM11-18]

## ET1703-99

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|---|---|
| **Product Type:** | Recombinant Rabbit monoclonal IgG, primary antibodies |
| **Species reactivity:** | Human, Mouse, Rat |
| **Applications:** | WB, IHC-P |
| **Molecular Wt:** | Predicted band size: 81 kDa |
| **Clone number:** | JM11-18 |

**Description:** 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 MRE11. 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 MRE11 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.

**Immunogen:** Synthetic peptide within Human Mre11 aa 465-498 / 708.

**Positive control:** HeLa cell lysate, 293T cell lysate, K-562 cell lysate, RAW264.7 cell lysate, C6 cell lysate, Mouse testis tissue lysate, Rat testis tissue lysate, human breast cancer tissue, mouse testis tissue, rat testis tissue.

**Subcellular location:** Nucleus.

**Database links:** SwissProt: P49959 Human | Q61216 Mouse | Q9JIM0 Rat

**Recommended Dilutions:**

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| **WB** | 1:1,000-1:5,000 |
| **IHC-P** | 1:1,000 |

**Storage Buffer:** 1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

**Storage Instruction:** Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.

**Purity:** Protein A affinity purified.

## Images

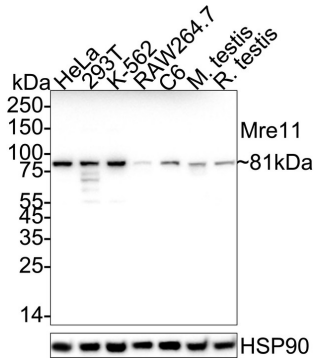


**Fig1:** Western blot analysis of Mre11 on different lysates with Rabbit anti-Mre11 antibody (ET1703-99) at 1/5,000 dilution.

Lane 1: HeLa cell lysate (20 µg/Lane)
Lane 2: 293T cell lysate (20 µg/Lane)
Lane 3: K-562 cell lysate (20 µg/Lane)
Lane 4: RAW264.7 cell lysate (20 µg/Lane)
Lane 5: C6 cell lysate (20 µg/Lane)
Lane 6: Mouse testis tissue lysate (40 µg/Lane)
Lane 7: Rat testis tissue lysate (40 µg/Lane)

Predicted band size: 81 kDa
Observed band size: 81 kDa

Exposure time: 20 seconds; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (ET1703-99) at 1/5,000 dilution was used in primary antibody dilution (K1803) at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

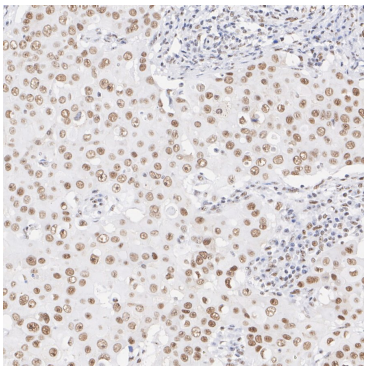

**Fig2:** Immunohistochemical analysis of paraffin-embedded human breast cancer tissue with Rabbit anti-Mre11 antibody (ET1703-99) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) (high pressure) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with dd$H_2O$ and PBS, and then probed with the primary antibody (ET1703-99) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

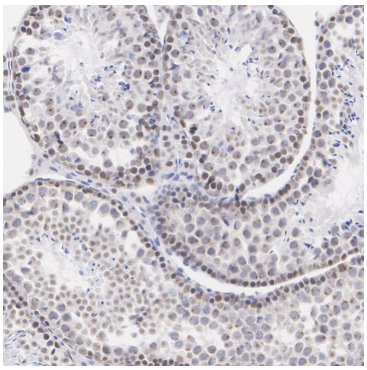

**Fig3:** Immunohistochemical analysis of paraffin-embedded mouse testis tissue with Rabbit anti-Mre11 antibody (ET1703-99) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with $ddH_2O$ and PBS, and then probed with the primary antibody (ET1703-99) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

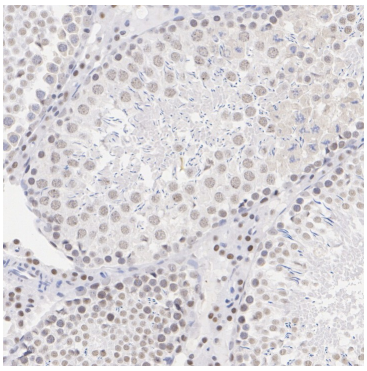

**Fig4:** Immunohistochemical analysis of paraffin-embedded rat testis tissue with Rabbit anti-Mre11 antibody (ET1703-99) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with $ddH_2O$ and PBS, and then probed with the primary antibody (ET1703-99) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.



## Background References

1. Lee J.-H.and Paull T.T. Direct activation of the ATM protein kinase by the Mre11/Rad50/Nbs1 complex. Science 304:93-96(2004).
2. de Jager M et al. Human Rad50/Mre11 is a flexible complex that can tether DNA ends. Mol. Cell 8:1129-1135(2001).