

# Product Datasheet

## Mre11 Antibody (15B8.1E7.6) - BSA Free NBP2-59677

Unit Size: 0.1 mg

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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**NBP2-59677**

Mre11 Antibody (15B8.1E7.6) - BSA Free

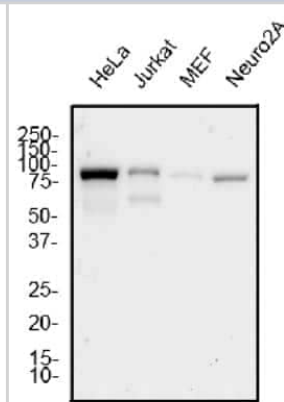
Product Information	
Unit Size	0.1 mg
Concentration	1.0 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	15B8.1E7.6
Preservative	0.02% Sodium Azide
Isotype	IgG
Purity	Protein A or G purified
Buffer	PBS

Product Description	
Description	Novus Biologicals Armenian Hamster Mre11 Antibody (15B8.1E7.6) - BSA Free (NBP2-59677) is a monoclonal antibody validated for use in IHC, WB, Flow and ICC/IF. Anti-Mre11 Antibody: Cited in 2 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Armenian Hamster
Gene ID	4361
Gene Symbol	MRE11
Species	Human, Mouse
Immunogen	Mre11 Antibody (15B8.1E7.6) was made to a partial recombinant mouse Mre11 protein (amino acids 68-608) [UniProt Q61216]

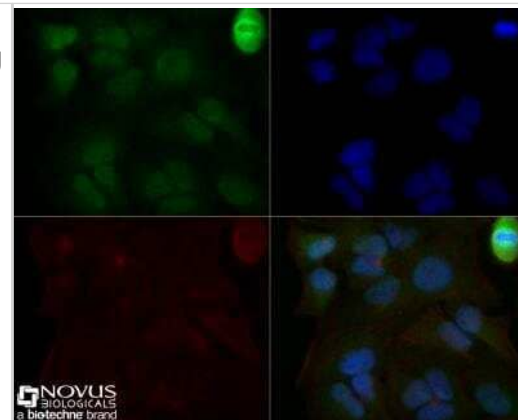
Product Application Details	
Applications	Western Blot, Immunohistochemistry-Paraffin, Flow Cytometry, Flow (Intracellular), Immunocytochemistry/ Immunofluorescence, Immunohistochemistry
Recommended Dilutions	Western Blot 1 - 2 ug/ml, Flow Cytometry 1 - 2.5 ug/mL, Immunohistochemistry 2 ug/ml, Immunocytochemistry/ Immunofluorescence 5-10 ug/ml, Immunohistochemistry-Paraffin 2 ug/ml, Flow (Intracellular)

**Images**

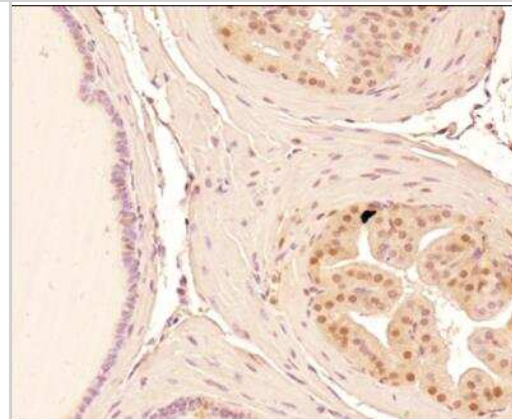
Western Blot: Mre11 Antibody (15B8.1E7.6) [NBP2-59677] - Total protein from human HeLa, Jurkat, and mouse MEF and Neuro2A cell lines was separated on a 12% gel by SDS-PAGE, transferred to PVDF membrane and blocked in 5% non-fat milk in TBST. The membrane was probed with 1.0 ug/ml anti-Mre11 in block buffer and detected with an anti-Armenian Hamster HRP secondary antibody using chemiluminescence.



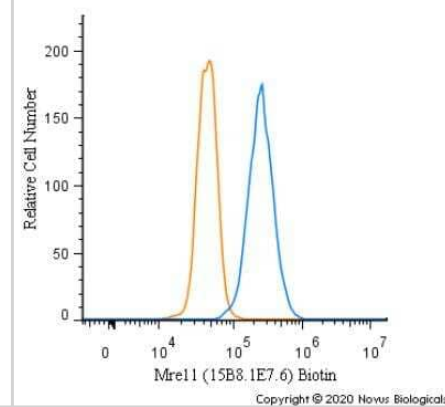
**Immunocytochemistry/Immunofluorescence: Mre11 Antibody (15B8.1E7.6) [NBP2-59677]** - HeLa cells were fixed for 10 minutes using 10% formalin and then permeabilized for 5 minutes using 1X TBS + 0.5% Triton-X100. The cells were incubated with anti-Mre11 (15B8.1E7.6) at 2 ug/ml overnight at 4C and detected with an anti-Armenian hamster IgG Dylight 488 (Green) at a 1:500 dilution. Actin was detected with Phalloidin 568 (Red) at a 1:200 dilution. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 40X objective.



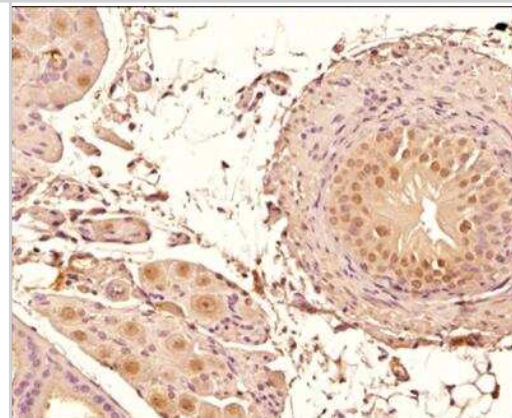
**Immunohistochemistry-Paraffin: Mre11 Antibody (15B8.1E7.6) [NBP2-59677]** - IHC analysis of a formalin fixed paraffin embedded (FFPE) tissue section of mouse prostate tissue section using 1:500 dilution of Mre11 antibody (clone 15B8.1E7.6). The signal was developed using HRP-DAB indirect detection method and the sections were counterstained using hematoxylin staining. This Mre11 antibody generated a strong nuclear with mild to moderate cytoplasmic staining in the glandular epithelial cells.



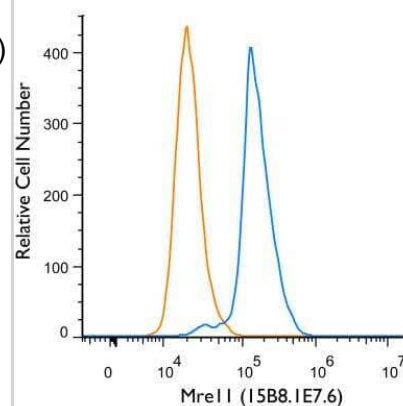
**Flow Cytometry: Mre11 Antibody (15B8.1E7.6) [NBP2-59677]** - An intracellular stain was performed on A431 cells with Mre11 [15B8.1E7.6] Antibody NBP2-59677B (blue) and a matched isotype control (orange). Both antibodies were conjugated to Biotin. Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 2.5 ug/mL for 30 minutes at room temperature, followed by Streptavidin - R-Phycoerythrin Protein (2012-1000, Novus Biologicals).



**Immunohistochemistry-Paraffin: Mre11 Antibody (15B8.1E7.6) [NBP2-59677]** - IHC analysis of a formalin fixed paraffin embedded (FFPE) tissue section of mouse prostate using 1:500 dilution of Mre11 antibody (clone 15B8.1E7.6). The signal was developed using HRP-DAB indirect detection method and the sections were counterstained using hematoxylin staining. This Mre11 antibody generated a strong nuclear positivity with considerable mild to moderate cytoplasmic staining in the glandular epithelial cells. Select cells depicted MRE11 foci which reflects towards the presence of DNA damage in those cells.

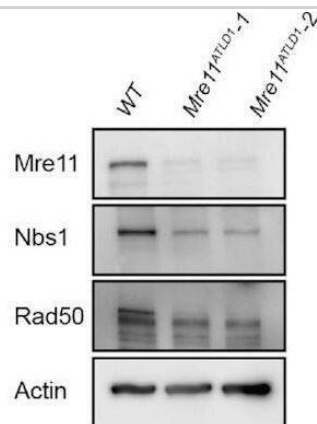


Flow (Intracellular): Mre11 Antibody (15B8.1E7.6) [NBP2-59677] - An intracellular stain was performed on HeLa Cells with Mre11 (15B8.1E7.6) antibody NBP2-59677 (blue). Unstained cells are shown in orange. Cells were fixed with 4% paraformaldehyde, following fixation, cells were permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 1 ug/mL for 30 minutes at room temperature, followed by armenian hamster IgG Alexa Flour 488-conjugated secondary.



Mre11 hypomorphism alters DSB repair pathway utilization. (A) Schema depicting the role of Mre11-mediated end resection in the regulation of DSB repair pathway choice. (B) Mre11ATLD1/ATLD1 MEFs exhibit reduced expression of the MRN complex by immunoblotting. (C–F) DSB repair products were identified in WT, Mre11ATLD1-1 and Mre11ATLD1-2 cells. (C) TMEJ-del 23 bp. (D) TMEJ-del 39 bp. (E) HR repair (HRD-500 donor) and (F) NHEJ-ins +1 bp. Mean +/- SEM are shown. Statistical significance was assessed by two-tailed t-tests. \*  $P < 0.05$ , \*\*  $P < 0.01$ , \*\*\*  $P < 0.001$  and \*\*\*\*  $P < 0.0001$ . Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/33963863>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.

**B**



## Publications

Feng W, Simpson DA, Cho JE et al. Marker-free quantification of repair pathway utilization at Cas9-induced double-strand breaks *Nucleic acids research* 2021-05-21 [PMID: 33963863]

Fagan-Solis KD, Simpson DA, Kumar RJ et al. A P53-Independent DNA Damage Response Suppresses Oncogenic Proliferation and Genome Instability *Cell Rep* 2020-02-04 [PMID: 32023457] (KD, WB, Mouse)

## Procedures

### Western Blot protocol for Mre11 Antibody (NBP2-59677)

#### Western Blot Protocol

1. Perform SDS-PAGE on samples to be analyzed, loading 25 ug of total protein per lane.
  2. Transfer proteins to membrane according to the instructions provided by the manufacturer of the membrane and transfer apparatus.
  3. Stain according to standard Ponceau S procedure (or similar product) to assess transfer success, and mark molecular weight standards where appropriate.
  4. Rinse the blot.
  5. Block the membrane using standard blocking buffer for at least 1 hour.
  6. Wash the membrane in wash buffer three times for 10 minutes each.
  7. Dilute anti-Mre11 primary antibody in blocking buffer and incubate 1 hour at room temperature.
  8. Wash the membrane in wash buffer three times for 10 minutes each.
  9. Apply the diluted HRP conjugated secondary antibody in blocking buffer (as per manufacturers instructions) and incubate 1 hour at room temperature.
  10. Wash the blot in wash buffer three times for 10 minutes each (this step can be repeated as required to reduce background).
  11. Apply the detection reagent of choice in accordance with the manufacturers instructions.
- Note: Tween-20 can be added to the blocking or antibody dilution buffer at a final concentration of 0.05-0.2%.

### Immunocytochemistry/Immunofluorescence protocol for Mre11 Antibody (NBP2-59677)

#### Immunocytochemistry Protocol

Culture cells to appropriate density in 35 mm culture dishes or 6-well plates.

1. Remove culture medium and add 10% formalin to the dish. Fix at room temperature for 30 minutes.
2. Remove the formalin and add ice cold methanol. Incubate for 5-10 minutes.
3. Remove methanol and add washing solution (i.e. PBS). Be sure to not let the specimen dry out. Wash three times for 10 minutes.
4. To block nonspecific antibody binding incubate in 10% normal goat serum from 1 hour to overnight at room temperature.
5. Add primary antibody at appropriate dilution and incubate at room temperature from 2 hours to overnight at room temperature.
6. Remove primary antibody and replace with washing solution. Wash three times for 10 minutes.
7. Add secondary antibody at appropriate dilution. Incubate for 1 hour at room temperature.
8. Remove antibody and replace with wash solution, then wash for 10 minutes. Add Hoechst 33258 to wash solution at 1:25,000 and incubate for 10 minutes. Wash a third time for 10 minutes.
9. Cells can be viewed directly after washing. The plates can also be stored in PBS containing Azide covered in Parafilm (TM). Cells can also be cover-slipped using Fluoromount, with appropriate sealing.

\*The above information is only intended as a guide. The researcher should determine what protocol best meets their needs. Please follow safe laboratory procedures.





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### **Products Related to NBP2-59677**

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NBP2-33376H	Blue Marker Antibody (6F4-F6) [HRP]
NB120-5738	Goat anti-Armenian Hamster IgG (H+L) Secondary Antibody
NBP1-97046	Armenian Hamster IgG Isotype Control
NB100-56339PEP	Mre11 Antibody Blocking Peptide

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### **Limitations**

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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