abcam

Product datasheet

Anti-Mre11 antibody [12D7] - BSA and Azide free ab214

10 Abreviews 92 References 5 Images

Overview

Product name	Anti-Mre11 antibody [12D7] - BSA and Azide free
Description	Mouse monoclonal [12D7] to Mre11 - BSA and Azide free
Host species	Mouse
Tested applications	**Suitable for:** Flow Cyt, IP, ICC/IF, WB
Species reactivity	**Reacts with:** Human **Does not react with:** Mouse, Rat
Immunogen	Synthetic peptide corresponding to Mre11 aa 150-600.
Positive control	WB HEK-293T, A431, HeLa, HepG2 whole cell lysate; ICC: HeLa cells.
General notes	This product was changed from ascites to tissue culture supernatant on 10th April 2019. Please note that the dilutions may need to be adjusted accordingly. If you have any questions, please do not hesitate to contact our scientific support team. The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.40 Constituent: 100% PBS
Carrier free	Yes
Purity	Protein G purified
Clonality	Monoclonal
Clone number	12D7

Myeloma	NS1
Isotype	IgG1
Light chain type	kappa

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab214 in the following tested applications.

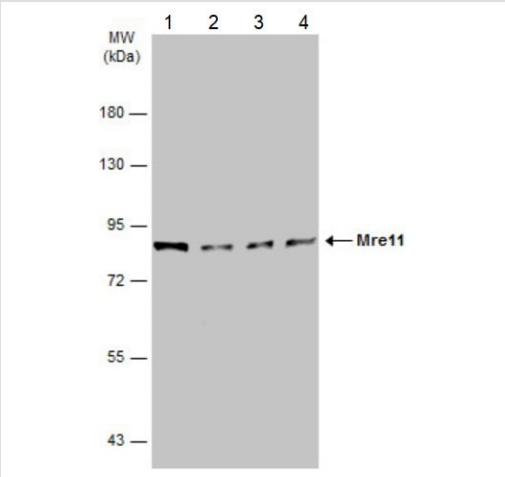
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Flow Cyt		Use 1-2µg for 10^6 cells. **ab170190** - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.
IP		Use at an assay dependent concentration. For normal lymphoblastoid cell lines.
ICC/IF	★★★★★ (2)	1/100 - 1/1000.
WB	★★★★★ (4)	1/500 - 1/3000. Detects a band of approximately 79 kDa (predicted molecular weight: 79 kDa). (see Robinson et al).

Target

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.
Involvement in 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.
Sequence similarities	Belongs to the MRE11/RAD32 family.
Post-translational modifications	Phosphorylated upon DNA damage, probably by ATM or ATR.
Cellular localization	Nucleus. Localizes to discrete nuclear foci after treatment with genotoxic agents.

Images



Western blot - Anti-Mre11 antibody [12D7] - BSA and Azide free (ab214)

All lanes : Anti-Mre11 antibody [12D7] - BSA and Azide free (ab214) at 1/1000 dilution

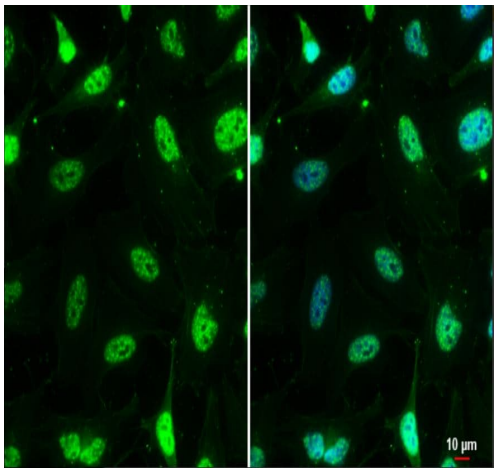
Lane 1 : HEK-293T (Human epithelial cell line from embryonic kidney transformed with large T antigen) whole cell lysate
Lane 2 : A431 (Human epidermoid carcinoma cell line) whole cell lysate
Lane 3 : HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate
Lane 4 : HepG2 (Human liver hepatocellular carcinoma cell line) whole cell lysate

Lysates/proteins at 30 µg per lane.

Secondary
All lanes : anti-mouse IgG HRP-conjugated antibody

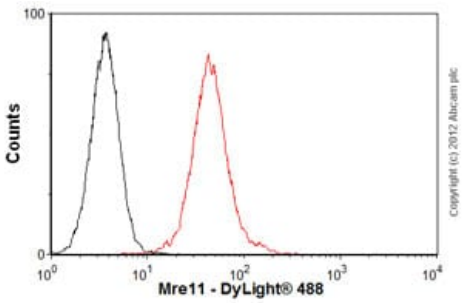
Predicted band size: 79 kDa

7.5% SDS-PAGE



Immunocytochemistry/ Immunofluorescence - Anti-Mre11 antibody [12D7] - BSA and Azide free (ab214)

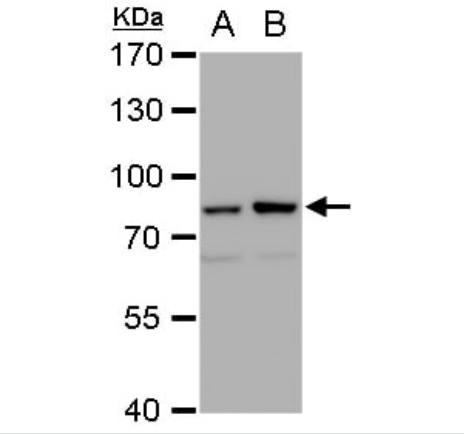
Immunocytochemical analysis of, 4% paraformaldehyde-fixed at RT for 15 min, HeLa (Human epithelial cell line from cervix adenocarcinoma) cells labeling Mre-11 (green) with ab214 at 1/200 dilution. Blue: Hoechst 33342 staining. Scale bar= 10 µm.



Flow Cytometry - Anti-Mre11 antibody [12D7] - BSA and Azide free (ab214)

Overlay histogram showing HeLa cells stained with ab214 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab214, 1µg/1x10^6 cells) for 30 min at 22ºC. The secondary antibody used was a goat **anti-mouse DyLight® 488** (IgG, H+L) (**ab96879**) at 1/500 dilution for 30 min at 22ºC. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (**ab91353**, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in HeLa cells fixed with 4% paraformaldehyde (10 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.

This image was generated using the ascites version of the product.



Western blot - Anti-Mre11 antibody [12D7] - BSA and Azide free (ab214)

All lanes : Anti-Mre11 antibody [12D7] - BSA and Azide free (ab214) at 1/1000 dilution

Lane 1 : HEK-293T (Human epithelial cell line from embryonic kidney transformed with large T antigen) whole cell lysate
Lane 2 : Human Mre-11-transfected HEK-293T whole cell lysate

Lysates/proteins at 30 µg per lane.

Secondary
All lanes : anti-mouse IgG HRP-conjugated antibody

Predicted band size: 79 kDa

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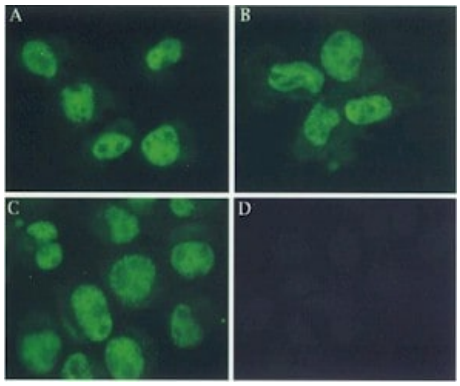
7.5% SDS-PAGE



Immunocytochemistry/ Immunofluorescence - Anti-Mre11 antibody [12D7] - BSA and Azide free (ab214)

Image supplied by Dr Domenico Delia, Istituto Nazionale Tumori, Italy.

Indirect immunofluorescence to detect localisation of Mre11 in normal lymphoblastoid cells.
(Panel D - negative control).

This image was generated using the ascites version of the product.

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