

Rabbit Anti-MRE11 [EP318]: RM0383

Intended Use: For Research Use Only

Description: Double-strand break repair protein MRE11 is a multifunctional protein that forms a MRE11-NBS1-RAD50 (M-N-R) complex in response to DNA damage. MRE11 is required for the correct assembly of the M-N-R complex, which plays a crucial role in activating cell cycle checkpoints and localizes at sites which DNA is undergoing repair. Mutations in MRE11 is linked with the Ataxia-Telangiectasia-like disorder (AT-LD), and recently implicated to predispose to cancer via inactivation of the M-N-R complex. While nuclear MRE11 staining is nearly ubiquitous in normal tissues, MRE11 mutations have been frequently identified in microsatellite instability (MSI) tumors, characteristic of mutations in the defective mismatch repair (MMR) system. MMR-defective cells progressively accumulate replication errors which may cause inactivation of potential tumor suppressor gene, leading to cancer progression. Several immunohistochemistry studies have reported the loss of MRE11 expression ranging from 50-83% in MSI and MMR-deficient colorectal, gastric, bladder, and endometrial cancers. Reduced or loss of MRE11 protein expression is an independent factor associated with worse cancer survival.

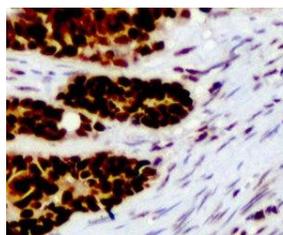
Specifications

Clone: EP318
 Source: Rabbit
 Isotype: IgG
 Reactivity: Human
 Localization: Nucleus
 Formulation: Antibody in PBS pH7.5, containing 0.2% BSA and <0.1% sodium azide (NaN₃)
 Storage: Store at 2°- 8°C
 Applications: IHC
 Package:

Description	Catalog No.	Size
MRE11 Concentrated	RM0383	1 ml

IHC Procedure

Positive Control: Colon
 Concentrated Dilution: 50-200
 Pretreatment: Citrate pH6.0 or EDTA pH8.0, 15 minutes using Pressure Cooker, or 30-60 minutes using water bath at 95°-99°C
 Incubation Time and Temp: 30-60 minutes @ RT
 Detection: Refer to the detection system manual
 * Result should be confirmed by an established diagnostic procedure.



FFPE human colon stained with anti-MRE11 using DAB

References:

1. Influence of MRE11, RAD50 and NIBRIN protein expression on survival in pancreatic carcinoma after curative resection. Horst K, et al. Pathol Res Pract. Oct;209(10):635-9, 2013.
2. Expression of TIP60 (tat-interactive protein) and MRE11 (meiotic recombination 11 homolog) predict treatment-specific outcome of localised invasive bladder cancer. Laurberg JR, et al. BJU Int. Dec;110(11 Pt C):E1228-36, 2012.
3. Role of MRE11 in cell proliferation, tumor invasion, and DNA repair in breast cancer. Yuan SS, et al. J Natl Cancer Inst. Oct 3;104(19):1485-502, 2012.

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