

For Research Use Only

CoraLite®594-conjugated NBN Monoclonal antibody



Catalog Number:CL594-66980

Basic Information

Catalog Number: CL594-66980	GenBank Accession Number: BC136803	Purification Method: Protein A purification
Size: 1000 µg/ml	GeneID (NCBI): 4683	CloneNo.: 1E11E10
Source: Mouse	UNIPROT ID: O60934	Recommended Dilutions: IF 1:50-1:500
Isotype: IgG2a	Full Name: nibrin	Excitation/Emission maxima wavelengths: 588 nm / 604 nm
Immunogen Catalog Number: AG19320	Calculated MW: 85 kDa	
	Observed MW: 95 kDa	

Applications

Tested Applications: FC (Intra), IF/ICC	Positive Controls: IF : HepG2 cells,
Species Specificity: Human	

Background Information

NBN, also named as NBS, NBS1 and P95, is a component of the MRE11/RAD50/NBN (MRN complex) which plays a critical role in the cellular response to DNA damage and the maintenance of chromosome integrity. The complex is involved in double-strand break (DSB) repair, DNA recombination, maintenance of telomere integrity, cell cycle checkpoint control and meiosis. The complex possesses single-strand endonuclease activity and double-strand-specific 3'-5' exonuclease activity, which are provided by MRE11A. NBN modulate the DNA damage signal sensing by recruiting PI3/PI4-kinase family members ATM, ATR, and probably DNA-PKcs to the DNA damage sites and activating their functions. NBN also functions in telomere length maintenance by generating the 3' overhang which serves as a primer for telomerase dependent telomere elongation. NBN is a major player in the control of intra-S-phase checkpoint and there is some evidence that NBN is involved in G1 and G2 checkpoints. Defects in NBN are the cause of Nijmegen breakage syndrome (NBS). Defects in NBN are a cause of genetic susceptibility to breast cancer (BC). Defects in NBN may be associated with aplastic anemia. Defects in NBN might play a role in the pathogenesis of childhood acute lymphoblastic leukemia (ALL). The antibody is specific to NBN. The full-length NBN protein, with an apparent molecular weight of 95 kDa and the two protein fragments of 26 and 70 kDa arising from the c.657_661del5 (p.K219fsX19) mutation, and the 80 kDa protein found in patient RR with the mutation c.742_743insGG leading to excision of exons 6 and 7 from the NBN mRNA are shown. (PMID: 26265251) The predicted molecular weight of NBN protein (p95) is 85kDa, actually detection result is about 95kDa(PMID: 23762398).

Storage

Storage:
Store at -20°C. Avoid exposure to light. Stable for one year after shipment.
Storage Buffer:
PBS with 50% Glycerol, 0.05% Proclin300, 0.5% BSA, pH 7.3.
Aliquoting is unnecessary for -20°C storage

For technical support and original validation data for this product please contact:

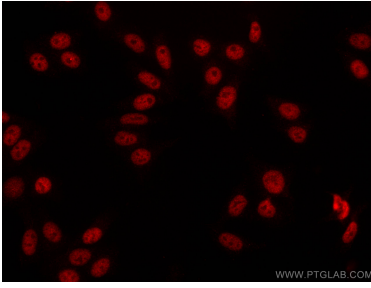
T: 4006900926

E: Proteintech-CN@ptglab.com

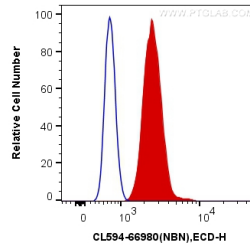
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Selected Validation Data



Immunofluorescent analysis of (4% PFA) fixed HepG2 cells using CoraLite®594-conjugated NBN antibody (CL594-66980, Clone: 1E11E10) at dilution of 1:200.



1X10⁶ HeLa cells were intracellularly stained with 0.4 ug CoraLite®594 Anti-Human NBN (CL594-66980, Clone:1E11E10) (red), or 0.4 ug Mouse IgG2a Isotype Control (CL594-66360-2, Clone: K11A1B2A2) (blue). Cells were fixed and permeabilized with Transcription Factor Staining Buffer Kit (PF00011).