For Research Use Only

NBN / NBS1 Monoclonal antibody

Catalog Number:66980-1-Ig

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Antibodies | ELISA kits | Proteins
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Basic Information

Catalog Number:
66980-1-Ig

Size:
150ul , Concentration: 2000 ug/ml by Nanodrop and 1000 ug/ml by Bradford method using BSA as the standard;

Source:
Mouse

Isotype:
IgG2a

Immunogen Catalog Number:
AG19320

GenBank Accession Number:
BC136803

GeneID (NCBI):
4683

UNIPROT ID:
O60934

Full Name:
nibrin

Calculated MW:
85 kDa

Observed MW:
95 kDa

Purification Method:
Protein A purification

CloneNo.:
1E11E10

Recommended Dilutions:
WB 1:1000-1:6000
IF/ICC 1:200-1:800

Applications

Tested Applications:
WB, IF/ICC, ELISA

Species Specificity:
Human

Positive Controls:

WB : SKOV-3 cells, LNCaP cells

IF/ICC : HepG2 cells,

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).

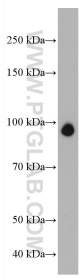
Storage

Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol pH 7.3.
Aliquoting is unnecessary for -20°C storage

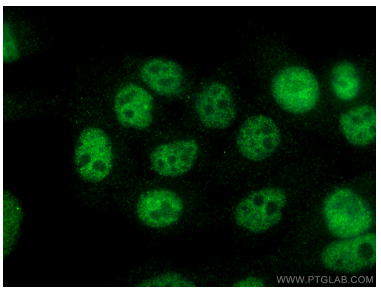
*** 20ul sizes contain 0.1% BSA

For technical support and original validation data for this product please contact:
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)
E: proteintech@ptglab.com
W: ptglab.com

Selected Validation Data



SKOV-3 cells were subjected to SDS PAGE followed by western blot with 66980-1-Ig (NBN antibody) at dilution of 1:3000 incubated at room temperature for 1.5 hours.



Immunofluorescent analysis of (4% PFA) fixed HepG2 cells using NBN / NBS1 antibody (66980-1-Ig, Clone: 1E11E10) at dilution of 1:400 and CoraLite®488-Conjugated Goat Anti-Mouse IgG(H+L).