

Anti-Phospho-p95/NBS1 (S343) NBN Rabbit Monoclonal Antibody
Catalog # ABO13180**Specification****Anti-Phospho-p95/NBS1 (S343) NBN Rabbit Monoclonal Antibody - Product Information**

Application	WB, IF, ICC, IP
Primary Accession	O60934
Host	Rabbit
Isotype	Rabbit IgG
Reactivity	Human
Clonality	Monoclonal
Format	Liquid

Description

Anti-Phospho-p95/NBS1 (S343) NBN Rabbit Monoclonal Antibody . Tested in WB, ICC/IF, IP applications. This antibody reacts with Human.

Anti-Phospho-p95/NBS1 (S343) NBN Rabbit Monoclonal Antibody - Additional Information

Gene ID 4683

Other Names

Nibrin, Cell cycle regulatory protein p95, Nijmegen breakage syndrome protein 1, hNbs1, NBN (HGNC:7652)

Calculated MW

84959 MW KDa

Application Details

WB 1:500-1:2000
ICC/IF 1:50-1:200
IP 1:50

Subcellular Localization

Nucleus. Nucleus, PML body. Chromosome, telomere. Localizes to discrete nuclear foci after treatment with genotoxic agents..

Tissue Specificity

Ubiquitous. Expressed at high levels in testis.

Contents

Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

Immunogen

A synthesized peptide derived from human Phospho-p95/NBS1 (S343)

Purification

Affinity-chromatography

Storage

Store at -20°C for one year. For short term

storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

Anti-Phospho-p95/NBS1 (S343) NBN Rabbit Monoclonal Antibody - Protein Information

Name NBN ([HGNC:7652](#))

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 (PubMed: [10888888](http://www.uniprot.org/citations/10888888), PubMed: [15616588](http://www.uniprot.org/citations/15616588), PubMed: [18411307](http://www.uniprot.org/citations/18411307), PubMed: [18583988](http://www.uniprot.org/citations/18583988), PubMed: [18678890](http://www.uniprot.org/citations/18678890), PubMed: [19759395](http://www.uniprot.org/citations/19759395), PubMed: [23115235](http://www.uniprot.org/citations/23115235), PubMed: [28216226](http://www.uniprot.org/citations/28216226), PubMed: [28867292](http://www.uniprot.org/citations/28867292), PubMed: [9705271](http://www.uniprot.org/citations/9705271)). The MRN complex is involved in the repair of DNA double-strand breaks (DSBs) via homologous recombination (HR), an error-free mechanism which primarily occurs during S and G2 phases (PubMed: [19759395](http://www.uniprot.org/citations/19759395), PubMed: [28867292](http://www.uniprot.org/citations/28867292), PubMed: [9705271](http://www.uniprot.org/citations/9705271)). The complex (1) mediates the end resection of damaged DNA, which generates proper single-stranded DNA, a key initial steps in HR, and is (2) required for the recruitment of other repair factors and efficient activation of ATM and ATR upon DNA damage (PubMed: [19759395](http://www.uniprot.org/citations/19759395), PubMed: [9705271](http://www.uniprot.org/citations/9705271)). The MRN complex possesses single-strand endonuclease activity and double-strand-specific 3'-5' exonuclease activity, which are provided by MRE11, to initiate end resection, which is required for single-strand invasion and recombination (PubMed: [19759395](http://www.uniprot.org/citations/19759395), PubMed: [28867292](http://www.uniprot.org/citations/28867292), PubMed: [9705271](http://www.uniprot.org/citations/9705271)). Within the MRN complex, NBN acts as a protein-protein adapter, which specifically recognizes and binds phosphorylated proteins, promoting their recruitment to DNA damage sites (PubMed: [12419185](http://www.uniprot.org/citations/12419185), PubMed: [15616588](http://www.uniprot.org/citations/15616588), PubMed: [18411307](http://www.uniprot.org/citations/18411307), PubMed: [18582474](http://www.uniprot.org/citations/18582474), PubMed: [18583988](http://www.uniprot.org/citations/18583988), PubMed: [18678890](http://www.uniprot.org/citations/18678890), PubMed: [19759395](http://www.uniprot.org/citations/19759395), PubMed: [19804756](http://www.uniprot.org/citations/19804756), PubMed: [23762398](http://www.uniprot.org/citations/23762398), PubMed: [24534091](http://www.uniprot.org/citations/24534091), PubMed: [27814491](http://www.uniprot.org/citations/27814491), PubMed: [27889449](http://www.uniprot.org/citations/27889449), PubMed: [33836577](http://www.uniprot.org/citations/33836577)). Recruits MRE11 and RAD50 components of the MRN complex to DSBs in response to DNA damage (PubMed: [12419185](http://www.uniprot.org/citations/12419185), PubMed: [18411307](http://www.uniprot.org/citations/18411307), PubMed: [18583988](http://www.uniprot.org/citations/18583988),

PubMed:18678890, PubMed:24534091, PubMed:26438602). Promotes the recruitment of PI3/PI4-kinase family members ATM, ATR, and probably DNA-PKcs to the DNA damage sites, activating their functions (PubMed:15064416, PubMed:15616588, PubMed:15790808, PubMed:16622404, PubMed:22464731, PubMed:30952868, PubMed:35076389). Mediates the recruitment of phosphorylated RBBP8/CtIP to DSBs, leading to cooperation between the MRN complex and RBBP8/CtIP to initiate end resection (PubMed:19759395, PubMed:27814491, PubMed:27889449, PubMed:33836577). RBBP8/CtIP specifically promotes the endonuclease activity of the MRN complex to clear DNA ends containing protein adducts (PubMed:27814491, PubMed:27889449, PubMed:30787182, PubMed:33836577). The MRN complex is also required for the processing of R-loops (PubMed:31537797). NBN also functions in telomere length maintenance via its interaction with TERF2: interaction with TERF2 during G1 phase preventing recruitment of DCLRE1B/Apollo to telomeres (PubMed:10888888, PubMed:28216226). NBN also promotes DNA repair choice at dysfunctional telomeres: NBN phosphorylation by CK2 promotes non-homologous end joining repair at telomeres, while unphosphorylated NBN promotes microhomology-mediated end-joining (MMEJ) repair (PubMed:28216226). Enhances AKT1 phosphorylation possibly by association with the mTORC2 complex (PubMed:23762398).

Cellular Location

Nucleus. Chromosome. Nucleus, PML body. Chromosome, telomere Note=Localizes to discrete nuclear foci after treatment with genotoxic agents (PubMed:10783165, PubMed:26215093, PubMed:26438602). Localizes to DNA double-strand breaks (DSBs); recruited to DNA damage sites via association with phosphorylated proteins, such as phosphorylated H2AX, phosphorylated MDC1 and phosphorylated RAD17 (PubMed:12419185, PubMed:18411307, PubMed:18582474, PubMed:18583988, PubMed:18678890, PubMed:19338747, PubMed:23115235, PubMed:24534091, PubMed:26438602) Acetylation of 'Lys-5' of histone H2AX (H2AXK5ac) promotes NBN/NBS1 assembly at the sites of DNA damage (PubMed:26438602)

Tissue Location

Ubiquitous (PubMed:9590180). Expressed at high levels in testis (PubMed:9590180).

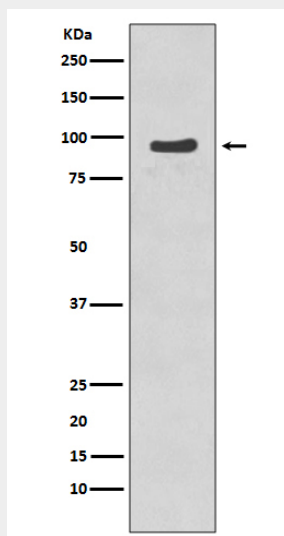
Anti-Phospho-p95/NBS1 (S343) NBN Rabbit Monoclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)

- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Anti-Phospho-p95/NBS1 (S343) NBN Rabbit Monoclonal Antibody - Images



Western blot analysis of p95/NBS1 phosphorylation expression in Jurkat cell lysate treated with Etoposide.