


Product datasheet

Anti-p95 NBS1 antibody [NBS1-501] ab49958

5 References

Overview

<b>Product name</b>	Anti-p95 NBS1 antibody [NBS1-501]
<b>Description</b>	Mouse monoclonal [NBS1-501] to p95 NBS1
<b>Host species</b>	Mouse
<b>Tested applications</b>	<b>Suitable for:</b> ICC, WB, IP, ELISA
<b>Species reactivity</b>	<b>Reacts with:</b> Human <b>Predicted to work with:</b> Mouse, Rat, Cow 
<b>Immunogen</b>	Synthetic peptide: GSKNVDLSGRQERKQ , corresponding to amino acids 206-220 of Human p95 NBS1 <a href="#">Run BLAST with</a> <a href="#">Run BLAST with</a>
<b>Positive control</b>	Nuclear extract of HEK 293T expressing recombinant human NBS1

Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	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.
<b>Storage buffer</b>	Preservative: 15mM Sodium Azide Constituents: 0.01M PBS, pH 7.4
<b>Purification notes</b>	Purified immunoglobulin
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	NBS1-501
<b>Myeloma</b>	NS1
<b>Isotype</b>	IgG1

Applications

Our [Abpromise guarantee](#) covers the use of **ab49958** 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
ICC		
WB		
IP		
ELISA		
<b>Application notes</b>	<p>ELISA: Use at an assay dependent dilution.            ICC: Use at an assay dependent dilution.            IP: Use at an assay dependent dilution.            WB: Use at a concentration of 2 - 4 µg/ml. Predicted molecular weight: 85 kDa.            Array: Use at an assay dependent dilution.</p> <p>Not yet tested in other applications.            Optimal dilutions/concentrations should be determined by the end user.</p>	
<b>Target</b>		
<b>Function</b>	<p>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. RAD50 may be required to bind DNA ends and hold them in close proximity. NBN modulate the DNA damage signal sensing by recruiting PI3/P14-kinase family members ATM, ATR, and probably DNA-PKcs to the DNA damage sites and activating their functions. It can also recruit MRE11 and RAD50 to the proximity of DSBs by an interaction with the histone H2AX. 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. The roles of NBS1/MRN encompass DNA damage sensor, signal transducer, and effector, which enable cells to maintain DNA integrity and genomic stability. Forms a complex with RBBP8 to link DNA double-strand break sensing to resection. Enhances AKT1 phosphorylation possibly by association with the mTORC2 complex.</p>	
<b>Tissue specificity</b>	Ubiquitous. Expressed at high levels in testis.	
<b>Involvement in disease</b>	<p>Nijmegen breakage syndrome            Breast cancer            Aplastic anemia            Defects in NBN might play a role in the pathogenesis of childhood acute lymphoblastic leukemia (ALL).</p>	
<b>Sequence similarities</b>	<p>Contains 1 BRCT domain.            Contains 1 FHA domain.</p>	
<b>Domain</b>	<p>The FHA and BRCT domains are likely to have a crucial role for both binding to histone H2AFX and for relocalization of MRE11/RAD50 complex to the vicinity of DNA damage.            The C-terminal domain contains a MRE11-binding site, and this interaction is required for the nuclear localization of the MRN complex.</p>	

The EEXXXDDL motif at the C-terminus is required for the interaction with ATM and its recruitment to sites of DNA damage and promote the phosphorylation of ATM substrates, leading to the events of DNA damage response.

**Post-translational modifications**

Phosphorylated by ATM in response of ionizing radiation, and such phosphorylation is responsible intra-S phase checkpoint control and telomere maintenance.

**Cellular localization**

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

**Please note:** All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE"

**Our Abpromise to you: Quality guaranteed and expert technical support**

---

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
  
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <http://www.abcam.com/abpromise> or contact our technical team.

**Terms and conditions**

---

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors