# abcam

### Product datasheet

## Anti-p95/NBS1 (phospho S343) antibody [EP178] ab109453



重组 RabMAb

3 References 4 图像

概述

产品名称 Anti-p95/NBS1 (phospho S343)抗体[EP178]

描述 兔单克隆抗体[EP178] to p95/NBS1 (phospho S343)

宿主 Rabbit

经测试应用 适用于: ICC/IF, Dot blot, WB

不适用于: Flow Cyt or IHC-P

种属反应性 与反应: Human

免疫原 Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.

阳性对照 WB: Jurkat, HeLa cell lysates (treated and untreated with Etopside). ICC/IF: Jurkat cells treated

with Etoposide (25uM) for 2 h

常规说明 This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility

- Improved sensitivity and specificity

- Long-term security of supply

- Animal-free production

For more information see here.

Our  $\mathsf{RabMAb}^{\texttt{®}}$  technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb**® **patents**.

Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with

these species. Please contact us for more information.

性能

形式 Liquid

存放说明 Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.

存储溶液 pH: 7.20

Preservative: 0.01% Sodium azide

Constituents: 9% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA, 50% Tissue culture

supernatant

纯度 Protein A purified

 克隆
 单克隆

 克隆编号
 EP178

 同种型
 laG

应用

The Abpromise guarantee Abpromise™承诺保证使用ab109453于以下的经测试应用

"应用说明"部分 下显示的仅为推荐的起始稀释度;实际最佳的稀释度/浓度应由使用者检定。

应用	Ab评论	说明
ICC/IF		1/50 - 1/100.
Dot blot		Use at an assay dependent concentration.
WB		1/500 - 1/1000. Detects a band of approximately 95 kDa (predicted molecular weight: 84 kDa).

应用说明 Is unsuitable for Flow Cyt or IHC-P.

靶标

功能

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/PI4-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.

组织**特异性** 

Ubiquitous. Expressed at high levels in testis.

疾病相关

Nijmegen breakage syndrome

Breast cancer Aplastic anemia

Defects in NBN might play a role in the pathogenesis of childhood acute lymphoblastic leukemia

(ALL).

序列相似性

Contains 1 BRCT domain.
Contains 1 FHA domain.

结**构域** 

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.

2

The C-terminal domain contains a MRE11-binding site, and this interaction is required for the nuclear localization of the MRN complex.

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.

Phosphorylated by ATM in response of ionizing radiation, and such phosphorylation is

Nucleus. Nucleus, PML body. Chromosome, telomere. Localizes to discrete nuclear foci after

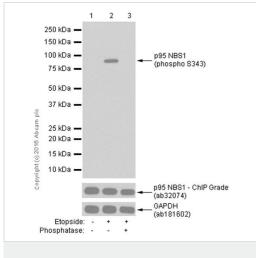
responsible intra-S phase checkpoint control and telomere maintenance.

treatment with genotoxic agents.

#### 图片

翻译后修饰

细胞定位



Western blot - Anti-p95/NBS1 (phospho S343) antibody [EP178] (ab109453)

All lanes: Anti-p95/NBS1 (phospho S343) antibody [EP178] (ab109453) at 1/5000 dilution

Lane 1: Untreated HeLa (Human epithelial cell line from cervix adenocarcinoma) cells whole cell lysates

Lane 2: HeLa (Human epithelial cell line from cervix adenocarcinoma) cells were treated with Etopside whole cell lysates

Lane 3: HeLa (Human epithelial cell line from cervix adenocarcinoma) cells were treated with Etopside whole cell lysates. Then the membrane was incubated with Alkaline phosphatase.

Lysates/proteins at 15 µg per lane.

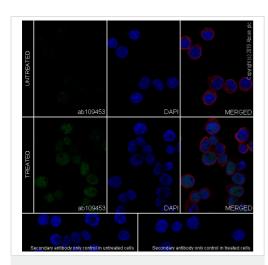
#### Secondary

All lanes: Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

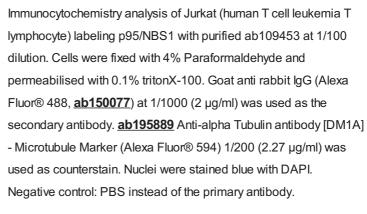
Predicted band size: 84 kDa Observed band size: 95 kDa

Exposure time: 1 minute

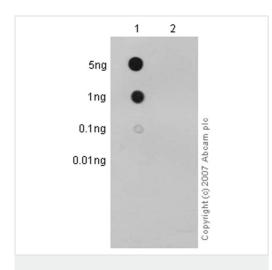
Blocking and diluting buffer: 5% NFDM/TBST



Immunocytochemistry/ Immunofluorescence - Antip95/NBS1 (phospho S343) antibody [EP178] (ab109453)



Confocal image showing increased nuclear staining in Jurkat cells treated with Etoposide (25uM) for 2 h.

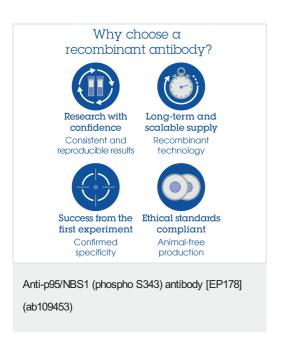


Dot Blot - Anti-p95/NBS1 (phospho S343) antibody [EP178] (ab109453)

Dot blot analysis of p95/NBS1 (pS343) peptide (Lane 1) and p95/NBS1 non-phospho peptide (Lane 2) labelling p95/NBS1 (phospho S343) with ab109453 at a dilution of 1/1000. A Peroxidase-conjugated goat anti-rabbit lgG (H+L) was used as the secondary antibody at a dilution of 1/2500.

Blocking and dilution buffer: 5% NFDM/TBST.

Exposure time: 3 minutes.



Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

#### 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 <a href="https://www.abcam.cn/abpromise">https://www.abcam.cn/abpromise</a> or contact our technical team.

#### Terms and conditions

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