

Anti-Nibrin Antibody
Rabbit polyclonal antibody to Nibrin
Catalog # AP59631**Specification**

Anti-Nibrin Antibody - Product Information

Application	WB, IH
Primary Accession	O60934
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	84959

Anti-Nibrin Antibody - Additional Information**Gene ID** 4683**Other Names**

NBS; NBS1; P95; Nibrin; Cell cycle regulatory protein p95; Nijmegen breakage syndrome protein 1

Target/Specificity

Recognizes endogenous levels of Nibrin protein.

Dilution

WB~~WB (1/500 - 1/1000), IH (1/100 - 1/200)

IH~~WB (1/500 - 1/1000), IH (1/100 - 1/200)

Format

Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide.

Storage

Store at -20 °C. Stable for 12 months from date of receipt

Anti-Nibrin Antibody - Protein Information**Name** NBN**Synonyms** NBS, NBS1, P95**Function**

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 MRE11. 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.

Cellular Location

Nucleus. Nucleus, PML body. Chromosome, telomere. Chromosome Note=Localizes to discrete nuclear foci after treatment with genotoxic agents (PubMed:26438602, PubMed:10783165, PubMed:26215093). Acetylation of 'Lys-5' of histone H2AX (H2AXK5ac) promotes NBN/NBS1 assembly at the sites of DNA damage (PubMed:26438602).

Tissue Location

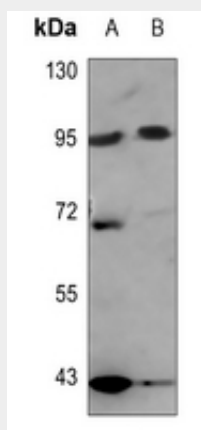
Ubiquitous (PubMed:9590180). Expressed at high levels in testis (PubMed:9590180).

Anti-Nibrin Antibody - Protocols

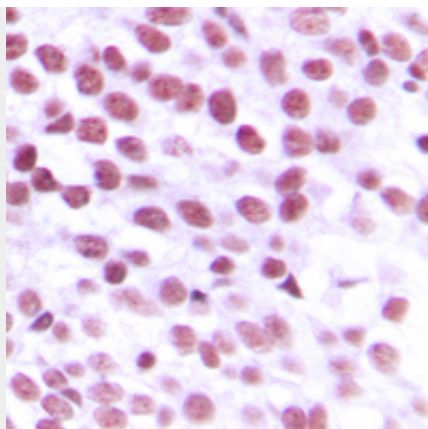
Provided below are standard protocols that you may find useful for product applications.

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

Anti-Nibrin Antibody - Images



Western blot analysis of Nibrin expression in HEK293T (A), A549 (B) whole cell lysates.



Immunohistochemical analysis of Nibrin staining in human breast cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

Anti-Nibrin Antibody - Background

KLH-conjugated synthetic peptide encompassing a sequence within the center region of human Nibrin. The exact sequence is proprietary.