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Rabbit Anti-p95 NBS1 antibody

SL6124R

Product Name:	p95 NBS1
Chinese Name:	细胞周期调节蛋白P95抗体
Alias:	p95/NBS1; p95; Nijmegen breakage syndrome 1; Nijmegen breakage syndrome 1 (nibrin); AT V1; AT V2; ATV; Cell cycle regulatory protein p95; FLJ10155; MGC87362; MGC93174; NBN; NBS 1; NBS; NBS1; Nibrin; Nijmegen breakage syndrome; Nijmegen breakage syndrome protein 1; NBN_HUMAN; Nibrin; Nijmegen breakage syndrome protein 1; Cell cycle regulatory protein p95.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Chicken,Dog,Cow,Horse,Rabbit,
Applications:	ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800IF=1:100-500（Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	85kDa
Cellular localization:	The nucleus
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human NBS1:641-754/754
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	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. **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 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. **Subunit:** Component of the MRN complex composed of two heterodimers RAD50/MRE11A associated with a single NBN. Component of the BASC complex, at least composed of BRCA1, MSH2, MSH6, MLH1, ATM, BLM, RAD50 and MRE11A (By similarity). Interacts with histone H2AFX this requires phosphorylation of H2AFX on 'Ser-139'. Interacts with HJURP, INTS3, KPNA2 and TERF2. Interacts with RBBP8; the interaction links the role of the MRN complex in DNA double-strand break sensing to resection. Interacts with SP100; recruits NBN to PML bodies. **Subcellular Location:** Nucleus. Nucleus, PML body. Chromosome, telomere. Note=Localizes to discrete nuclear foci after treatment with genotoxic agents.

Tissue Specificity:
Ubiquitous. Expressed at high levels in testis.

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

DISEASE:
Nijmegen breakage syndrome (NBS) [MIM:251260]: A disorder characterized by chromosomal instability, radiation sensitivity, microcephaly, growth retardation, immunodeficiency and predisposition to cancer, particularly to lymphoid malignancies. Note=The disease is caused by mutations affecting the gene represented in this entry.
Breast cancer (BC) [MIM:114480]: A common malignancy originating from breast epithelial tissue. Breast neoplasms can be distinguished by their histologic pattern. Invasive ductal carcinoma is by far the most common type. Breast cancer is etiologically and genetically heterogeneous. Important genetic factors have been indicated by familial occurrence and bilateral involvement. Mutations at more than one locus can be involved in different families or even in the same case. Note=Disease susceptibility is associated with variations affecting the gene represented in this entry.
Aplastic anemia (AA) [MIM:609135]: A form of anemia in which the bone marrow fails to produce adequate numbers of peripheral blood elements. It is characterized by peripheral pancytopenia and marrow hypoplasia. Note=Disease susceptibility may be associated with variations affecting the gene represented in this entry.
Note=Defects in NBN might play a role in the pathogenesis of childhood acute lymphoblastic leukemia (ALL).

Similarity:
Contains 1 BRCT domain.
Contains 1 FHA domain.

SWISS:
O60934

Gene ID:
4683

Database links:

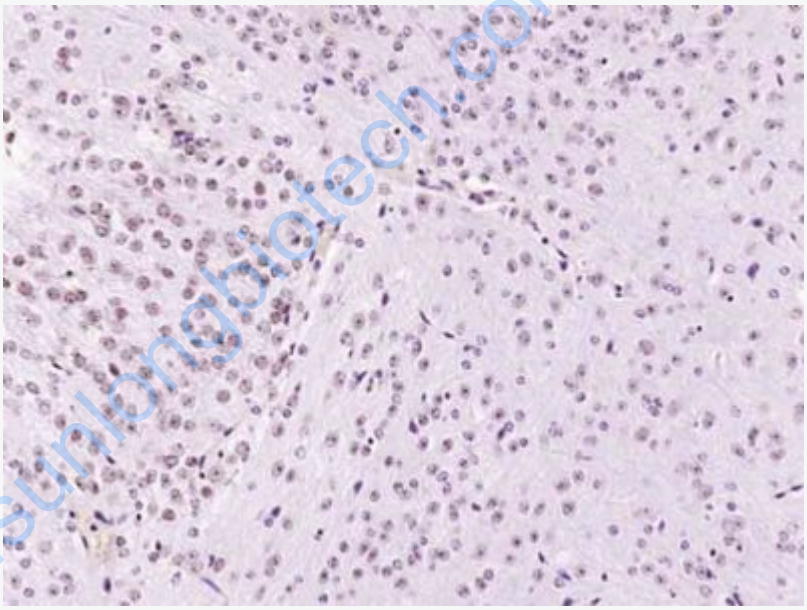
Entrez Gene: 4683Human

Entrez Gene: 27354Mouse

Entrez Gene: 85482Rat

Omim: 602667Human

SwissProt: O60934Human

	SwissProt: Q9R207Mouse SwissProt: Q9JIL9Rat Unigene: 492208Human Unigene: 20866Mouse Unigene: 25214Rat **Important Note:** This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Picture:	 Paraformaldehyde-fixed, paraffin embedded (Mouse brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (p95 NBS1) Polyclonal Antibody, Unconjugated (SL6124R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.