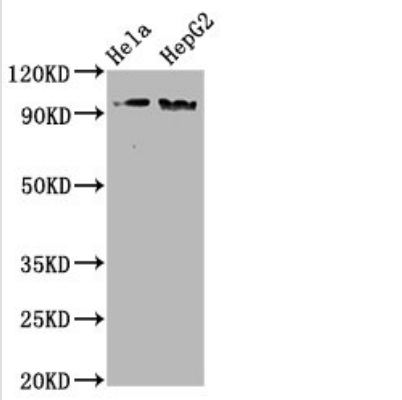
Phospho-NBN (S343) Antibody

Product Code	CSB-RA015486A343phHU
Abbreviation	Nibrin
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	O60934
Immunogen	A synthesized peptide derived from Human Phospho-NBN (S343)
Species Reactivity	Human
Tested Applications	ELISA, WB; Recommended dilution: WB:1:500-1:5000
Relevance	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.
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Alias	Nibrin, Cell cycle regulatory protein p95, Nijmegen breakage syndrome protein 1, NBN, NBS, NBS1, P95
Immunogen Species	Homo sapiens (Human)
Research Area	Epigenetics and Nuclear Signaling

Gene Names	NBN
Accession NO.	1B4

Image



Western Blot
Positive WB detected in Hela whole cell lysate,HepG2 whole cell lysate
All lanes Phospho-NBN antibody at 1.98μg/ml
Secondary
Goat polyclonal to rabbit IgG at 1/50000 dilution
Predicted band size: 95 KDa
Observed band size: 95 KDa

Description

The phospho-NBN (S343) recombinant monoclonal antibody is a highly specific antibody against the phosphorylated human NBN at Ser 343. This phospho-NBN (S343) antibody was expressed by transfecting the S343 phospho-NBN monoclonal antibody gene-vector clones into the cell line for in vitro production and subsequent purification from the tissue culture supernatant (TCS) through affinity-chromatography. Its isotype matches with the rabbit IgG. This anti-NBN-pS343 antibody can be used in ELISA and WB applications.

NBN is a part of the MRE11/RAD50/NBN complex, which is involved in the detection and repair of DNA double-strand breaks in the early stages. The Nijmegen breakage syndrome is caused by mutations in the NBN gene (NBS). ATM phosphorylation of NbN is required for some human cell responses to DNA damage. The central region of NBN has several SQ motifs that are phosphorylated by ATM. In particular, phosphorylation of serine residues S278 and S343 are required for intra-S phase checkpoint activation.