#3001 Store at –20°C

Phospho-p95/NBS1 (Ser343) Antibody

☑ 100 µl
(10 Western mini-blots)

Cell Signaling TECHNOLOGY®

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Entrez-Gene ID # 4683
Swiss-Prot Acc. # O60934

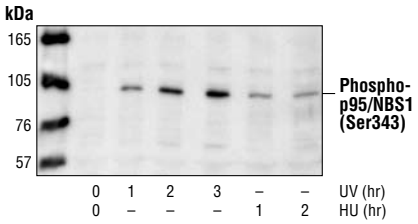
Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, E-P Endogenous	H, M, Mi	95 kDa	Rabbit**

Background: The Nijmegen breakage syndrome (NBS) is characterized by defects in cell cycle checkpoints, growth retardation, an increased propensity for cancer and sensitivity to ionizing radiation (1). Repair of DNA double-strand breaks by radiation is dependent on a multifunctional complex containing Rad50, Mre11 and the NBS1 gene product p95/NBS1 (also called p95 or nibrin) (2). p95/NBS1 is a protein with a forkhead-associated domain and a carboxy-terminal repeat frequently found in cell cycle regulatory and DNA repair proteins (1,3). The overlap between clinical and cellular phenotypes in ataxia telangiectasia (AT) and NBS suggests that AT-mutated (ATM) and p95/NBS1 function in the same biochemical pathway. ATM interacts with and phosphorylates p95/NBS1 at Ser343 after exposure to ionizing radiation (4–7).

Specificity/Sensitivity: Phospho-p95/NBS1 (Ser343) Antibody detects endogenous levels of p95/NBS1 only when phosphorylated at serine 343.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic phospho-peptide (KLH-coupled) corresponding to residues surrounding Ser343 of human p95/NBS1. Antibodies are purified by protein A and peptide affinity chromatography.

Selected Application References:
Lukas, C. et al. (2003) Distinct spatiotemporal dynamics of mammalian checkpoint regulators induced by DNA damage. *Nat. Cell Biol.* 5, 255–260. Applications: IC-IF, W.



Western blot analysis of extracts from MvlLu cells treated with UV or hydroxyurea (HU) for the indicated times, using Phospho-p95/NBS1 (Ser343) Antibody.

Background References:
(1) Varon, R. et al. (1998) *Cell* 93, 467–476.
(2) Carney, J.P. et al. (1998) *Cell* 93, 477–486.
(3) Durocher, D. et al. (1999) *Mol. Cell* 4, 387–394.
(4) Gatei, M. et al. (2000) *Nat. Genet.* 25, 115–119.
(5) Lim, D.S. et al. (2000) *Nature* 404, 613–617.
(6) Wu, X. et al. (2000) *Nature* 405, 477–482.
(7) Zhao, S. et al. (2000) *Nature* 405, 473–477.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. *Do not aliquot the antibody.*

***Species cross-reactivity is determined by Western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

For application specific protocols please see the web page for this product at www.cellsignal.com.

Recommended Antibody Dilutions:

Western blotting	1:1000
ELISA-Peptide	1:200

Companion Products:
Phospho-Chk1 (Ser345) Antibody #2341
Phospho-Chk2 (Thr68) Antibody #2661
Phospho-p53 (Ser15) Antibody #9284
Phospho-p53 (Ser15) (16G8) Mouse mAb #9286
Phospho-p53 (Ser20) Antibody #9287
Anti-rabbit IgG, HRP-linked Antibody #7074
Prestained Protein Marker, Broad Range (Premixed Format) #7720
Biotinylated Protein Ladder Detection Pack #7727
20X LumiGLO® Reagent and 20X Peroxide #7003

Please visit www.cellsignal.com for a complete listing of recommended companion products.

IMPORTANT: For Western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **IC**—Immunocytochemistry **IF**—Immunofluorescence **F**—Flow cytometry **E**—ELISA **D**—DELFIA®

Species Cross-Reactivity Key: **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **X**—Xenopus **Z**—zebra fish **B**—bovine **All**—all species expected
Species enclosed in parentheses are predicted to react based on 100% sequence homology.