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**#14956**

# p95/NBS1 (D6J5I) Rabbit mAb

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**Entrez-Gene ID #4683**  
**UniProt ID #060934**

rev. 09/04/18

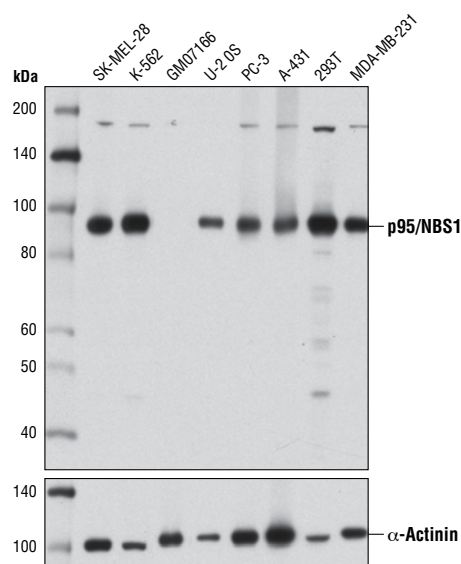
**For Research Use Only. Not For Use In Diagnostic Procedures.**

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP, IF-IC Endogenous	H, M, R	95 kDa	Rabbit IgG**

**Background:** Nijmegen breakage syndrome (NBS) is characterized by growth retardation, mental disability, immunodeficiency, defects in cell cycle checkpoints, an increased propensity for cancer, and sensitivity to ionizing radiation (1). Repair of radiation-induced DNA double-strand breaks is dependent on the multi-functional MRN complex containing Mre11, Rad50, 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 BRCT repeat that regulate interaction with MDC1 and are essential for proper G2/M DNA-damage checkpoint function (3). NBS1 is critical for homologous recombination following DNA double strand breaks. This activity requires CDK-dependent association with CtIP and subsequent phosphorylation by ATM (4). ATM interacts with and phosphorylates p95/NBS1 at Ser278 and Ser343 after exposure to ionizing radiation (5,6).

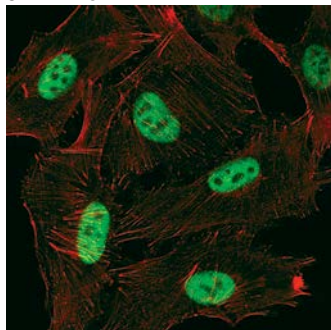
**Specificity/Sensitivity:** p95/NBS1 (D6J5I) Rabbit mAb recognizes endogenous levels of total p95/NBS1 protein. This antibody also cross-reacts with an unidentified protein of 180 kDa in some cell lines.

**Source/Purification:** Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ala740 of human p95/NBS1 protein.

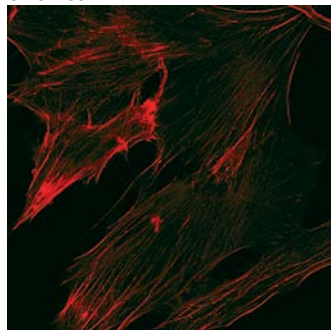


Western blot analysis of extracts from various cell lines using p95/NBS1 (D6J5I) Rabbit mAb (upper) and  $\alpha$ -Actinin (D6F6) XP<sup>®</sup> Rabbit mAb #6487 (lower).

SK-MEL-28



GM07166



Confocal immunofluorescent analysis of SK-MEL-28 (left) and GM07166 (right) cells using p95/NBS1 (D6J5I) Rabbit mAb (green). Actin filaments were labeled with DyLight™ 554 Phalloidin #13054.

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100  $\mu$ g/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at  $-20^{\circ}\text{C}$ . Do not aliquot the antibody.

\*Species cross-reactivity is determined by western blot.

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

**Recommended Antibody Dilutions:**

Western blotting	1:1000
Immunoprecipitation	1:100
Immunofluorescence (IF-IC)	1:100

**For product specific protocols and a complete listing of recommended companion products please see the product web page at [www.cellsignal.com](http://www.cellsignal.com)**

**Background References:**

- (1) Chrzanowska, K.H. et al. (2012) *Orphanet J Rare Dis* 7, 13.
- (2) Lee, J.H. et al. (2013) *J Biol Chem* 288, 12840-51.
- (3) Hari, F.J. et al. (2010) *EMBO Rep* 11, 387-92.
- (4) Wang, H. et al. (2013) *PLoS Genet* 9, e1003277.
- (5) Zhao, S. et al. (2000) *Nature* 405, 473-7.
- (6) Wen, J. et al. (2013) *Oncogene* 32, 4448-56.

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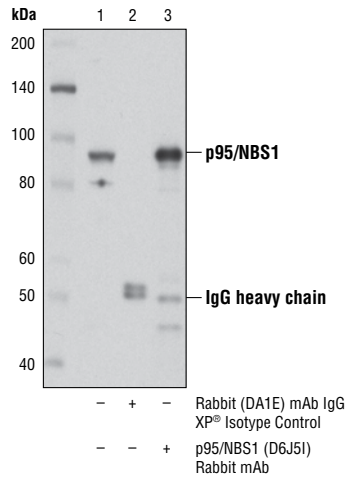
Tween is a registered trademark of ICI Americas, Inc.

**IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween®20 at 4°C with gentle shaking, overnight.**

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Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide Species Cross-Reactivity: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.

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*Immunoprecipitation of p95/NBS1 from HeLa cell extracts using Rabbit (DA1E) mAb IgG XP® Isotype Control #3900 (lane 2) or p95/NBS1 (D6J51) Rabbit mAb (lane 3). Lane 1 is 10% input. Western blot was performed using p95/NBS1 (D6J51) Rabbit mAb.*