

#14956 Store at -20C

## p95/NBS1 (D6J5I) Rabbit mAb

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP, IF-IC	H M R	Endogenous	95	Rabbit IgG	#O60934	4683

Product Usage  
Information

## Application

Western Blotting  
Immunoprecipitation  
Immunofluorescence (Immunocytochemistry)

## Dilution

1:1000  
1:100  
1:100

## Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

## 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.

## 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 multifunctional 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).

## 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.

## Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

## Western Blot Buffer

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

## Applications Key

**WB:** Western Blotting **IP:** Immunoprecipitation **IF-IC:** Immunofluorescence (Immunocytochemistry)

## Cross-Reactivity Key

**H:** human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **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  
**GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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