

#3002 Store at -20C

p95/NBS1 Antibody



Cell Signaling
TECHNOLOGY®

Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB	H M R Mk Mi	Endogenous	95	Rabbit	#O60934	4683

Product Usage Information	Application Western Blotting	Dilution 1:1000
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.	
Specificity / Sensitivity	p95/NBS1 Antibody detects endogenous levels of total p95/NBS1 protein.	
Source / Purification	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to carboxy-terminal residues of human p95/NBS1. Antibodies are purified by protein A and peptide affinity chromatography.	
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	<ol style="list-style-type: none"> 1. Chrzanowska, K.H. et al. (2012) <i>Orphanet J Rare Dis</i> 7, 13. 2. Lee, J.H. et al. (2013) <i>J Biol Chem</i> 288, 12840-51. 3. Hari, F.J. et al. (2010) <i>EMBO Rep</i> 11, 387-92. 4. Wang, H. et al. (2013) <i>PLoS Genet</i> 9, e1003277. 5. Zhao, S. et al. (2000) <i>Nature</i> 405, 473-7. 6. Wen, J. et al. (2013) <i>Oncogene</i> 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 BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.
Applications Key	WB: Western Blotting
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
Trademarks and Patents	Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc. All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.
Limited Uses	Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.