

# Product Datasheet

## Rad50 Antibody - Azide and BSA Free NB100-1487

Unit Size: 0.1 ml

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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**NB100-1487**

Rad50 Antibody - Azide and BSA Free

Product Information	
Unit Size	0.1 ml
Concentration	This product is unpurified. The exact concentration of antibody is not quantifiable.
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	No Preservative
Isotype	IgG
Purity	Unpurified
Buffer	Whole antisera
Target Molecular Weight	153 kDa

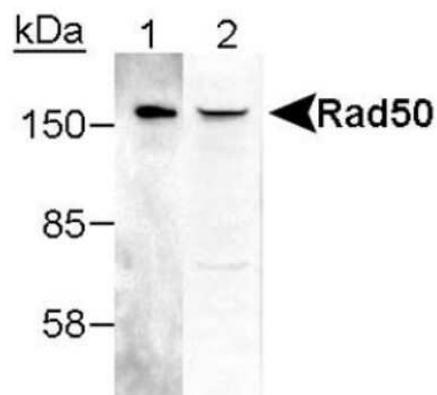
Product Description	
Description	Novus Biologicals Rabbit Rad50 Antibody - Azide and BSA Free (NB100-1487) is a polyclonal antibody validated for use in WB, Simple Western and IP. Anti-Rad50 Antibody: Cited in 5 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Rabbit
Gene ID	10111
Gene Symbol	RAD50
Species	Human
Immunogen	Human RAD50 zinc hook region (amino acids 628-787) expressed in E. coli. [UniProt# Q92878]

Product Application Details	
Applications	Western Blot, Simple Western, Immunoprecipitation
Recommended Dilutions	Western Blot 1:1000-1:10000, Simple Western 1:1000, Immunoprecipitation 1-5ul
Application Notes	<p>This RAD50 antibody is useful for Immunoprecipitation and Western blot, where a band can be seen at approximately 153 kDa.</p> <p>In Simple Western only 10 - 15 uL of the recommended dilution is used per data point.</p> <p>See <a href="#">Simple Western Antibody Database</a> for Simple Western validation: Tested in HeLa lysate 0.5 mg/mL, separated by Size, antibody dilution of 1:1000, apparent MW was 149 kDa. Separated by Size-Wes, Sally Sue/Peggy Sue.</p> <p>The observed molecular weight of the protein may vary from the listed predicted molecular weight due to post translational modifications, post translation cleavages, relative charges, and other experimental factors.</p>



## Images

Western Blot: Rad50 Antibody [NB100-1487] - Detection of Rad50 using NB100-1487. Lane 1: 25 ng purified hMre11-hRad50 complex Lane 2: 25 ug crude HeLa extract.



Simple Western: Rad50 Antibody [NB100-1487] - Simple Western lane view shows a specific band for Rad50 in 0.5 mg/ml of HeLa lysate. This experiment was performed under reducing conditions using the 12-230 kDa separation system.



## Publications

Patil S, Chalkiadaki K, Mergiya TF, Krimbacher K et al. eIF4E phosphorylation recruits  $\beta$ -catenin to mRNA cap and promotes Wnt pathway translation in dentate gyrus LTP maintenance *iScience* 2023-05-30 [PMID: 37250335]

Zhou H, Kawamura K, Yanagihara H et al. NBS1 is regulated by two kind of mechanisms: ATM-dependent complex formation with MRE11 and RAD50, and cell cycle-dependent degradation of protein J *Radiat Res.* 2017-03-22 [PMID: 28369484] (WB, Human)

### Details:

The regulatory mechanisms of the MRN complex, formed by NBS1 with MRE11 and RAD50, are investigated through immunoprecipitation.

Chang L, Huang J, Wang K et al. Targeting Rad50 sensitizes human nasopharyngeal carcinoma cells to radiotherapy. *BMC Cancer* 2016-03-07 [PMID: 26951044] (WB)

Kobayashi J, Saito Y, Okui M, Miwa N. Increased oxidative stress in AOA3 cells disturbs ATM-dependent DNA damage responses *Mutation Research/Genetic Toxicology and Environmental Mutagenesis* 2015-03-18 [PMID: 25868131] (WB, Human)

Cahill, D et al. Dimerization of the Rad50 protein is independent of the conserved hook domain. *Mutagenesis*;22(4):269-74. 2007-07-01 [PMID: 17426050] (WB, Human)

## Procedures

### Western Blot protocol for Rad50 Antibody (NB100-1487)

Rad50 Antibody:

Western blot

1. Gel/Transfer set up according to manufacturer's instructions (NuPAGE, Invitrogen).
2. Block: 1X TBST +5% milk (TBST: 100mM Tris pH 7.5, 150mM NaCl, 0.1% Tween) for 1 hour at room temperature.
3. Wash 3 times (5 minutes) in 1X TBST.
4. Primary Antibody: Rad50, hook serum (NB100-1487) diluted 1:5,000 in 1X TBST and incubated for 1 hour at room temperature.
5. Wash 3 times (10 minutes) in 1X TBST.
6. Secondary Antibody: Anti-rabbit IgG diluted in 1X TBST and incubated for 1 hour at room temperature.
7. Wash 3 times (5 minutes) in 1X TBST.
8. Expose: Chemiluminescent HRP for 15-60 seconds.

NOTE: This is the protocol used to obtain the image on the datasheet.





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### **Products Related to NB100-1487**

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NB800-PC1	HeLa Whole Cell Lysate
NBP2-33376H	Blue Marker Antibody (6F4-F6) [HRP]
HAF008	Goat anti-Rabbit IgG Secondary Antibody [HRP]
NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control

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### **Limitations**

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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