Product Datasheet

Rad51C Antibody
NB100-177SS

Unit Size: 0.025 ml

Store at 4C. Do not freeze.

Publications: 21

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NB100-177SS

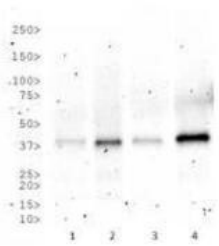
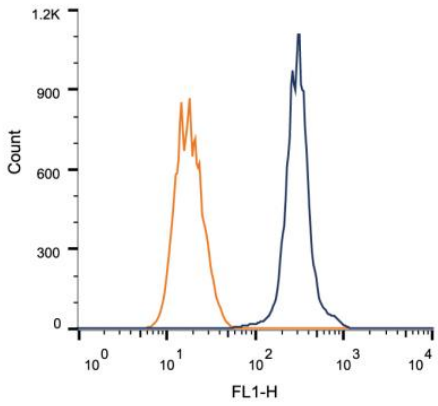
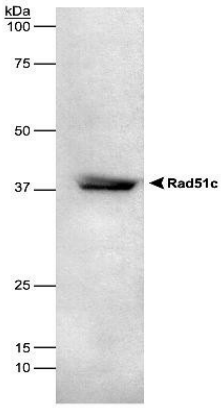
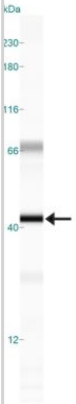
Rad51C Antibody (2H11/6)

Product Information	
Unit Size	0.025 ml
Concentration	1 mg/ml
Storage	Store at 4C. Do not freeze.
Clonality	Monoclonal
Clone	2H11/6
Preservative	0.02% Sodium Azide
Isotype	IgG1 Kappa
Purity	Protein G purified
Buffer	PBS, pH 7.4
Target Molecular Weight	40 kDa

Product Description	
Host	Mouse
Gene ID	5889
Gene Symbol	RAD51C
Species	Human, Mouse, Primate, Yeast
Species Reactivity	Human, mouse, yeast, and primate.
Specificity/Sensitivity	Does not cross-react with Rad51B, Rad51D, Rad51, XRCC2, or XRCC3 in Western analysis.
Immunogen	His-tagged human Rad51C, over-expressed in E. coli. [UniProt# O43502]

Product Application Details	
Applications	Western Blot, Simple Western, Flow Cytometry, Immunocytochemistry/Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Paraffin, Immunoprecipitation
Recommended Dilutions	Western Blot 1:1000, Immunocytochemistry/Immunofluorescence, Immunoprecipitation, Immunohistochemistry, Immunohistochemistry-Paraffin, Flow Cytometry 1 ug per million cells, Simple Western 1:100
Application Notes	This Rad51C (2H11/6) antibody is useful for Flow Cytometry and Western Blot. In WB, a band can be seen at ~40 kDa. Preliminary feedback has been negative for Immunofluorescence on 4% PFA-fixed human cell lines (H1299 and MCF7). Use in IHC-P was reported in the scientific literature (PMID: 23512992).In Simple Western only 10-15 uL of the recommended dilution is used per data point.

Images

Western Blot: Rad51C Antibody (2H11/6) [NB100-177] - Analysis of RAD51c in 1) Hela WCE 2) HepG2 WCE 3) Cos-7 WCE 4) Hek293 WCE.	
Flow Cytometry: Rad51C Antibody (2H11/6) [NB100-177] - Intracellular flow cytometric staining of 1 x 10^6 HeLa cells using Rad51C antibody (dark blue). Isotype control shown in orange. An antibody concentration of 1 ug/1x10^6 cells was used.	
Western Blot: Rad51C Antibody (2H11/6) [NB100-177] - Rad51C detected in HEK293 lysate using NB 100-177. Photo courtesy of B.T. Bennett & K. Knight, University of Massachusetts Medical School.	
Simple Western: Rad51C Antibody (2H11/6) [NB100-177] - Simple Western lane view shows a specific band for Rad51C in 0.5 mg/ml of HepG2 lysate. This experiment was performed under reducing conditions using the 12-230 kDa separation system.	

Publications

Huang JW, Wang Y, Dhillon KK et al. Systematic Screen Identifies miRNAs That Target RAD51 and RAD51D to Enhance Chemosensitivity. Mol Cancer Res 2013 Dec [PMID: 24088786] (WB, Human)

Park JY, Singh TR, Nassar N et al. Breast cancer-associated missense mutants of the PALB2 WD40 domain, which directly binds RAD51C, RAD51 and BRCA2, disrupt DNA repair. Oncogene. 2013 Oct 21 [PMID: 24141787] (WB, Human)

Min A, Im SA, Yoon YK et al. RAD51C-Deficient Cancer Cells Are Highly Sensitive to the PARP Inhibitor Olaparib. Mol Cancer Ther 2013 Jun [PMID: 23512992] (WB, IHC-P, ICC/IF, Human)

Jensen RB, Ozes A, Kim T et al. BRCA2 is epistatic to the RAD51 paralogs in response to DNA damage. DNA Repair (Amst) 2013 Feb 2 [PMID: 23384538] (WB, Human)

Wang Y, Huang JW, Calses P et al. MiR-96 Downregulates REV1 and RAD51 to Promote Cellular Sensitivity to Cisplatin and PARP Inhibition Cancer Res 2012 Aug 15 [PMID: 22761336] (WB, Human)

Mao Z, Tian X, Van Meter M et al. Sirtuin 6 (SIRT6) rescues the decline of homologous recombination repair during replicative senescence Proc Natl Acad Sci U S A 2012 Jul 2 [PMID: 22753495] (WB, Human)

Kim TH, Payne U, Zhang X, Iwanaga Y, Davey MP, Rosenbaum JT, Inman RD. Altered host:pathogen interactions conferred by the Blau syndrome mutation of NOD2. Rheumatol Int;27(3):257-62. 2007 Jan. [PMID: 20413593]

Nagaraju, G et al. Differential regulation of short- and long-tract gene conversion between sister chromatids by Rad51C. Mol Cell Biol;26(21):8075-86. 2006 Nov. [PMID: 16954385]

Maacke, H. Autoantibodies in sera of pancreatic cancer patients identify recombination factor Rad51 as a tumour-associated antigen. J Cancer Res Clin Oncol;128(4):219-22. 2002 Apr. [PMID: 11935313] (WB, IHC, Human)

Shammas MA, Shmookler Reis RJ, Koley H et al. Dysfunctional homologous recombination mediates genomic instability and progression in myeloma. Blood;113(10):2290-7. 2009 Mar 5. [PMID: 19050310] (ICC/IF, Human)

Fan, R et al. Defective DNA strand break repair after DNA damage in prostate cancer cells: implications for genetic instability and prostate cancer progression. Cancer Res;64(23):8526-33. 2004 Dec 1. [PMID: 15574758]

Liu, Y et al. RAD51C is required for Holliday junction processing in mammalian cells. Science;303(5655):243-6. 2004 Jan 9. [PMID: 14716019] (Human)

More publications at http://www.novusbio.com/NB100-177

Procedures

Western Blot Protocol for Rad51C Antibody (NB100-177)
Western Blot Protocol

1. Preparation of samples for loading ~50-80ug of sample containing laemmli loading dye (containing SDS) at 90 degrees Celsius for ~2 minutes.
2. Load sample onto a 10% Tris-HCL gel and run for ~30 minutes at 200V (or until dye front reaches bottom of gel).
3. Place gel in transfer buffer for 10 minutes (192mM Glycine, 25mM Tris-HCL, 20% Methanol). Pre-soak two pieces of Whatman paper and PVDF, as well.

NOTE: The PVDF should be soaked in CH3OH for ~ 1minute, rinsed in ddH20 and then placed in transfer buffer.

4. Transfer the protein from the gel to the membrane using a semi-dry transfer apparatus. Run for 20 minutes at 20V.
5. Block non-specific proteins with blocking buffer #1 (10mM Tris-HCL pH 8.0, 300mM NaCL, 0.025% Tween 20) for 10 minutes. Then continue blocking in blocking buffer #2 (buffer #1 + 15% nonfat dry milk) for an additional hour, gently rocking at room temperature (RT) or overnight at 4 degrees Celcius.
6. Dilute the primary antibody (anti-Rad51C, NB 100-177) in antibody dilution buffer (blocking buffer #1 + 2% milk).
7. Wash the membrane briefly with some blocking buffer #1 and then add your diluted primary antibody.
8. Incubate the primary for 1 hour at room temperature, gently rocking. Again this can be done overnight at 4 Celcius.

9. Wash 3X with blocking buffer #1 for 10 minutes, each, gently rocking.
10. Incubate the diluted secondary antibody (anti-mouse IgG conjugated to HRP), diluted in antibody dilution buffer, for 1 hour at room temperature, gently rocking.
11. Wash 2X with blocking buffer #1 for 10 minutes, each, gently rocking. Wash 1X with blocking buffer #1 for 30 minutes, gently rocking.
12. Develop membrane with your chemiluminescent substrate.

NOTE: NIH 3T3 and HEK 293 whole cell extracts and mouse embryonic fibroblast cells have been used as positive controls for this antibody.

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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.

For more information on our guarantee, please visit www.novusbio.com/guarantee.