

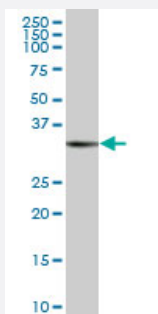
MaxPab®

RAD51 purified MaxPab mouse polyclonal antibody (B01P)

Catalog # H00005888-B01P

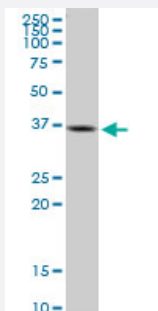
Size 50 ug

Applications



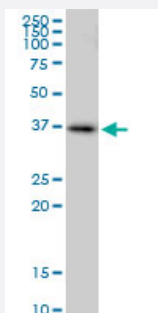
Western Blot (Tissue lysate)

RAD51 MaxPab polyclonal antibody. Western Blot analysis of RAD51 expression in human colon.



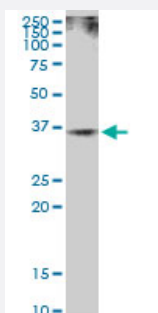
Western Blot (Cell lysate)

RAD51 MaxPab polyclonal antibody. Western Blot analysis of RAD51 expression in NIH/3T3.



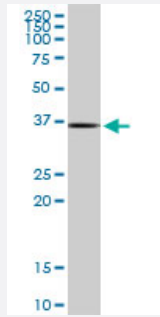
Western Blot (Cell lysate)

RAD51 MaxPab polyclonal antibody. Western Blot analysis of RAD51 expression in Jurkat.



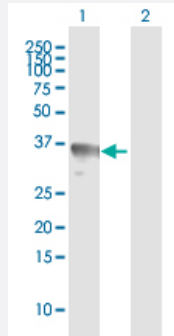
Western Blot (Cell lysate)

RAD51 MaxPab polyclonal antibody. Western Blot analysis of RAD51 expression in PC-12.



Western Blot (Cell lysate)

RAD51 MaxPab polyclonal antibody. Western Blot analysis of RAD51 expression in Raw 264.7.

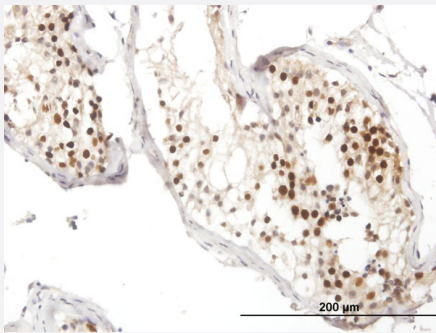


Western Blot (Transfected lysate)

Western Blot analysis of RAD51 expression in transfected 293T cell line ([H00005888-T01](#)) by RAD51 MaxPab polyclonal antibody.

Lane 1: RAD51 transfected lysate(37.29 KDa).

Lane 2: Non-transfected lysate.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

Immunoperoxidase of purified MaxPab antibody to RAD51 on formalin-fixed paraffin-embedded human testis. [antibody concentration 3 ug/ml]

Specification

Product Description	Mouse polyclonal antibody raised against a full-length human RAD51 protein.
Immunogen	RAD51 (NP_002866.2, 1 a.a. ~ 339 a.a) full-length human protein.
Sequence	MAMQMQLEANADTSVEEESFGPQPISRLEQCGINANDVKKLEEAGFHTVEAVAYAPKKELINIKGI SEAKADKILAEAAKLVPMTTATEFHQRRSEIIQITTSKELDKLLQGGIETGSITEMFGEFRTGKT QICHTLAVTCQLPIDRGGGEGKAMYIDTEGTFRPERLLAVAERYGLSGSDVLDNVAYARAFNTDHQ TQLLYQASAMMVESRYALLVDSATALYRTDYSGRGELSARQMHLARFLRMLRLADEFGVAVVIT NQVVAQVDGAAMFAADPKKPIGGNIIAHASTTRL YLRKGRGETRICKIYDSPCLPEAEAMFAINADG VGDAKD
Host	Mouse
Reactivity	Human, Mouse, Rat
Quality Control Testing	Antibody reactive against mammalian transfected lysate.

Storage Buffer

In 1x PBS, pH 7.4

Storage Instruction

Store at -20°C or lower. Aliquot to avoid repeated freezing and thawing.

Applications

- Western Blot (Tissue lysate)

RAD51 MaxPab polyclonal antibody. Western Blot analysis of RAD51 expression in human colon.

[Protocol Download](#)

- Western Blot (Cell lysate)

RAD51 MaxPab polyclonal antibody. Western Blot analysis of RAD51 expression in NIH/3T3.

[Protocol Download](#)

- Western Blot (Cell lysate)

RAD51 MaxPab polyclonal antibody. Western Blot analysis of RAD51 expression in Jurkat.

[Protocol Download](#)

- Western Blot (Cell lysate)

RAD51 MaxPab polyclonal antibody. Western Blot analysis of RAD51 expression in PC-12.

[Protocol Download](#)

- Western Blot (Cell lysate)

RAD51 MaxPab polyclonal antibody. Western Blot analysis of RAD51 expression in Raw 264.7.

[Protocol Download](#)

- Western Blot (Transfected lysate)

Western Blot analysis of RAD51 expression in transfected 293T cell line ([H00005888-T01](#)) by RAD51 MaxPab polyclonal antibody.

Lane 1: RAD51 transfected lysate(37.29 KDa).

Lane 2: Non-transfected lysate.

[Protocol Download](#)

- Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

Immunoperoxidase of purified MaxPab antibody to RAD51 on formalin-fixed paraffin-embedded human testis. [antibody concentration 3 ug/ml]

[Protocol Download](#)

Gene Info — RAD51

Entrez GeneID [5888](#)

GeneBank Accession# [NM_002875](#)

Protein Accession# [NP_002866.2](#)

Gene Name RAD51

Gene Alias BRCC5, HRAD51, HsRad51, HsT16930, RAD51A, RECA

Gene Description RAD51 homolog (RecA homolog, E. coli) (S. cerevisiae)

Omim ID [114480 179617](#)

Gene Ontology [Hyperlink](#)

Gene Summary The protein encoded by this gene is a member of the RAD51 protein family. RAD51 family members are highly similar to bacterial RecA and Saccharomyces cerevisiae Rad51, and are known to be involved in the homologous recombination and repair of DNA. This protein can interact with the ssDNA-binding protein RPA and RAD52, and it is thought to play roles in homologous pairing and strand transfer of DNA. This protein is also found to interact with BRCA1 and BRCA2, which may be important for the cellular response to DNA damage. BRCA2 is shown to regulate both the intracellular localization and DNA-binding ability of this protein. Loss of these controls following BRCA2 inactivation may be a key event leading to genomic instability and tumorigenesis. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq]

Other Designations BRCA1/BRCA2-containing complex, subunit 5|DNA repair protein RAD51 homolog 1|RAD51 homolog protein|RAD51, S.cerevisiae, homolog of, A|RecA, E. coli, homolog of|RecA-like protein|recombination protein A

Publication Reference

- [DNA binding and RAD51 engagement by the BRCA2 C-terminus orchestrate DNA repair and replication fork preservation.](#)

Youngho Kwon, Heike Rösner, Weixing Zhao, Platon Selemenakis, Zhuoling He, Ajinkya S Kawale, Jeffrey N Katz, Cody M Rogers, Francisco E Neal, Aida Badamchi Shabestari, Valdemaras Petrosius, Akhilesh K Singh, Marina Z Joel, Lucy Lu, Stephen P Holloway, Sandeep Burma, Bipasha Mukherjee, Robert Hromas, Alexander Mazin, Claudia Wiese, Claus S Sørensen, Patrick Sung.

Nature Communications 2023 Jan; 14(1):432.

Application: WB, Human, HeLa cells

- [BNIP3-dependent mitophagy safeguards ESC genomic integrity via preventing oxidative stress-induced DNA damage and protecting homologous recombination.](#)

Qian Zhao, Kun Liu, Lin Zhang, Zheng Li, Liang Wang, Jiani Cao, Youqing Xu, Aihua Zheng, Quan Chen, Tongbiao Zhao.

Cell Death & Disease 2022 Nov; 13(11):976.

Application: IF, WB-Ce, WB-Tr, Mouse, Mouse embryonic stem cells

- [Bloom helicase mediates formation of large single-stranded DNA loops during DNA end processing.](#)

Chaoyou Xue, Sameer J Salunkhe, Nozomi Tomimatsu, Ajinkya S Kawale, Youngho Kwon, Sandeep Burma, Patrick Sung, Eric C Greene.

Nature Communications 2022 Apr; 13(1):2248.

Application: IF-Tr, Human, U2OS cells

- [A small-molecule inhibitor of the BRCA2-RAD51 interaction modulates RAD51 assembly and potentiates DNA damage-induced cell death.](#)

Duncan E Scott, Nicola J Francis-Newton, May E Marsh, Anthony G Coyne, Gerhard Fischer, Tommaso Moschetti, Andrew R Bayly, Timothy D Sharpe, Kalina T Haas, Lorraine Barber, Chiara R Valenzano, Rajavel Srinivasan, David J Huggins, Miyoung Lee, Amy Emery, Bryn Hardwick, Matthias Ehebauer, Claudio Dagostin, Alessandro Esposito, Luca Pellegrini, Trevor Perrior, Grahame McKenzie, Tom L Blundell, Marko Hyvönen, John Skidmore, Ashok R Venkitaraman, Chris Abell.

Cell Chemical Biology 2021 Jun; 28(6):835.

Application: IF, Human, A549 cells

- [Matrin3 promotes homologous recombinational repair by regulation of RAD51.](#)

Shi L, Sun J, Kinomura A, Fukuto A, Horikoshi Y, Tashiro S.

Journal of Biochemistry 2019 May; mvz041.

Application: IF, WB-Tr, Human, GM0637, U-2 OS cells

- [Nucleolar protein nucleolin functions in replication stress-induced DNA damage responses.](#)

Kawamura K, Qi F, Meng Q, Hayashi I, Kobayashi J.

Journal of Radiation Research 2019 May; 60(3):281.

Application: IF, WB-Tr, Human, U-2 OS cells

- [Maternal gene Ooep may participate in homologous recombination-mediated DNA double-strand break repair in mouse oocytes.](#)

He DJ, Wang L, Zhang ZB, Guo K, Li JZ, He XC, Cui QH, Zheng P.

Zoological Research 2018 Nov; 39(6):387.

Application: IF, WB, Mouse, Mouse Oocyte

- [A Class of Environmental and Endogenous Toxins Induces BRCA2 Haploinsufficiency and Genome Instability.](#)

Tan SLW, Chadha S, Liu Y, Gabasova E, Perera D, Ahmed K, Constantinou S, Renaudin X, Lee M, Aebersold R, Venkitaraman AR.

Cell 2017 Jun; 169(6):1105.

Application: IF, Human, HeLa cells

- [RecA bundles mediate homology pairing between distant sisters during DNA break repair.](#)

Lesterlin C, Ball G, Schermelleh L, Sherratt DJ.

Nature 2014 Feb; 506(7487):249.

Application: ICC, Bacteria, E. coli K12 TB28

- [A cancer-associated BRCA2 mutation reveals masked nuclear export signals controlling localization.](#)

Jeyasekharan AD, Liu Y, Hattori H, Pisupati V, Jonsdottir AB, Rajendra E, Lee M, Sundaramoorthy E, Schlachter S, Kaminski CF, Rosenfeld Y, Sato K, Savill J, Ayoub N, Venkitaraman AR.

Nature Structural & Molecular Biology 2013 Oct; 20(10):1191.

Application: IF, Human, 293T cells

Pathway

- [Homologous recombination](#)
- [Pancreatic cancer](#)
- [Pathways in cancer](#)

Disease

- [Acute Disease](#)
- [Adenocarcinoma](#)
- [Ataxia telangiectasia](#)

- [Brain Neoplasms](#)
- [Breast cancer](#)
- [Breast Neoplasms](#)
- [Carcinoma](#)
- [Chromosome Aberrations](#)
- [Colorectal Neoplasms](#)
- [DNA Damage](#)
- [DNA Repair-Deficiency Disorders](#)
- [Esophageal Neoplasms](#)
- [Fanconi Anemia](#)
- [Genetic Predisposition to Disease](#)
- [Glioma](#)
- [Head and Neck Neoplasms](#)
- [Hematologic Diseases](#)
- [Hodgkin Disease](#)
- [Leukemia](#)
- [Lung Neoplasms](#)
- [Lymphatic Metastasis](#)
- [Lymphoma](#)
- [Lymphoproliferative Disorders](#)
- [Meningeal Neoplasms](#)
- [Meningioma](#)
- [Multiple Sclerosis](#)
- [Myelodysplastic Syndromes](#)
- [Neoplasms](#)
- [Neuroma](#)

- [Occupational Diseases](#)
- [Ovarian cancer](#)
- [Ovarian Neoplasms](#)
- [Pancreatic Neoplasms](#)
- [Precancerous Conditions](#)
- [Prostate cancer](#)
- [Prostatic Neoplasms](#)
- [Pulmonary Disease](#)
- [Radiodermatitis](#)
- [Recurrence](#)
- [Stomach Neoplasms](#)
- [Thyroid Neoplasms](#)
- [Urinary Bladder Neoplasms](#)
- [Waldenstrom Macroglobulinemia](#)
- [Werner syndrome](#)