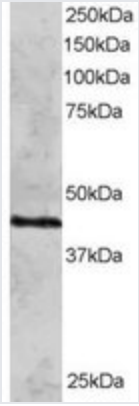
RAD51C Antibody – Goat Polyclonal

PRODUCT OVERVIEW

Product Name	RAD51C, Polyclonal Antibody
Full Product Name	Goat anti-RAD51C Antibody
Product Gene Name	anti-RAD51C antibody
Product Synonym Names	RAD51C; RAD51 homolog C (S. cerevisiae); RAD51L2; yeast RAD51 homolog 3; DNA repair protein RAD51 homolog 3; MGC104277; RAD51 homolog C; RAD51 homolog C, isoform 1; RAD51C antibody; RAD51 homolog C (S. cerevisiae) antibody; RAD51L2 antibody; yeast RAD51 homolog 3 antibody; DNA repair protein RAD51 homolog 3 antibody; MGC104277 antibody; RAD51 homolog C antibody; RAD51 homolog C; isoform 1 antibody
Immunogen Sequence	RGKTFRFEMQ RDL
Clonality	Polyclonal
Host	Goat
Species Reactivity	Tested: Human; Expected from sequence similarity: Human
Form/Format	Supplied at 0.5 mg/ml in Tris saline, 0. 02% sodium azide, pH7.3 with 0.5% bovine serum albumin.
Purity/Purification	Purified from goat serum by ammonium sulphate precipitation followed by antigen affinity chromatography using the immunizing peptide.
Concentration	100ug specific antibody in 200ul (lot specific)
Preparation and Storage	Aliquot and store at -20 degree C. Minimize freezing and thawing.
Antibody/Peptide Pairs	RAD51C peptide (MBS426727) is used for blocking the activity of RAD51C antibody (MBS420543)
Molecular Weight	14,883 Da
OMIM	602774
Immunogen	Peptide with sequence RGKTFRFEMQRDL-C, from the N Terminus of the protein sequence according to NP_002867.1; NP_478123.1.
Epitope	N Terminus
Note	This antibody is expected to recognise all reported human isoforms.
ISO Certification	Manufactured in an ISO 9001:2008 Certified Laboratory.
Applications Tested/Suitable for anti-RAD51C antibody	Peptide ELISA (EIA), Western Blot (WB)
Application Notes for anti-RAD51C antibody	Peptide ELISA: Antibody detection limit dilution 1: 32000. Western Blot: Approx 45kDa band seen in HeLa lysate [Predicted MW of 41kDa according to NP_478123]. Recommended for use at 1-3ug/ml.
Related Product Information for anti-RAD51C antibody	MBS420543 is an antibody targeting RAD51C. Also known as Goat anti-RAD51C Antibody. Reactive in Tested: Human; Expected from sequence similarity: Human. Host: Goat.
Other Notes	Small volumes of anti-RAD51C antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.



Western Blot (WB) of anti-RAD51C antibody
Staining (2ug/ml) of HeLa lysate (RIPA buffer, 30ug total protein per lane). Primary incubated for 12 hour. Detected by western blot using chemiluminescence.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for RAD51C. It may not necessarily be applicable to this product.

NCBI GI #	4506391
NCBI GeneID	5889
NCBI Accession #	NP_002867.1
NCBI Related Accession #	NP_478123.1
UniProt Secondary Accession #	O43503; Q3B783
UniProt Related Accession #	O43502
GenBank Nucleotide #	NM_002876.3
NCBI Official Full Name	DNA repair protein RAD51 homolog 3 isoform 2
NCBI Official Synonym Full Names	RAD51 paralog C
NCBI Official Symbol	RAD51C
NCBI Official Synonym Symbols	FANCO; R51H3; BROVCA3; RAD51L2
UniProt Protein Name	DNA repair protein RAD51 homolog 3
UniProt Synonym Protein Names	RAD51 homolog C; RAD51-like protein 2
Protein Family	DNA repair protein
UniProt Gene Name	RAD51C
UniProt Synonym Gene Names	RAD51L2; R51H3
UniProt Entry Name	RA51C_HUMAN
NCBI Protein Information	DNA repair protein RAD51 homolog 3
NCBI Summary for RAD51C	This gene is a member of the RAD51 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 other RAD51 paralogs and is reported to be important for Holliday junction resolution. Mutations in this gene are associated with Fanconi anemia-like syndrome. This gene is one of four localized to a region of chromosome 17q23 where amplification occurs frequently in breast tumors. Overexpression of the four genes during amplification has been observed and suggests a possible role in tumor progression. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jul 2013]

UniProt Comments for RAD51C	RAD51C: Essential for the homologous recombination (HR) pathway of DNA repair. Involved in the homologous recombination repair (HRR) pathway of double-stranded DNA breaks arising during DNA replication or induced by DNA-damaging agents. The RAD51B-RAD51C dimer exhibits single-stranded DNA-dependent ATPase activity. The BCDX2 complex binds single-stranded DNA, single-stranded gaps in duplex DNA and specifically to nicks in duplex DNA. Participates in branch migration and Holliday junction resolution and thus is important for processing HR intermediates late in the DNA repair process. Also has an early function in DNA repair in facilitating phosphorylation of the checkpoint kinase CHEK2 and thereby transduction of the damage signal, leading to cell cycle arrest and HR activation. Protects RAD51 from ubiquitin-mediated degradation that is enhanced following DNA damage. Plays a role in regulating mitochondrial DNA copy number under conditions of oxidative stress in the presence of RAD51 and XRCC3. Contributes to DNA cross-link resistance, sister chromatid cohesion and genomic stability. Involved in maintaining centrosome number in mitosis. Defects in RAD51C are the cause of Fanconi anemia complementation group O (FANCO). It is a disorder affecting all bone marrow elements and resulting in anemia, leukopenia and thrombopenia. It is associated with cardiac, renal and limb malformations, dermal pigmentary changes, and a predisposition to the development of malignancies. At the cellular level it is associated with hypersensitivity to DNA-damaging agents, chromosomal instability (increased chromosome breakage) and defective DNA repair. Defects in RAD51C are the cause of familial breast- ovarian cancer type 3 (BROVCA3). It is a condition associated with familial predisposition to cancer of the breast and ovaries. Characteristic features in affected families are an early age of onset of breast cancer (often before age 50), increased chance of bilateral cancers (cancer that develop in both breasts, or both ovaries, independently), frequent occurrence of breast cancer among men, increased incidence of tumors of other specific organs, such as the prostate. Belongs to the RecA family. RAD51 subfamily. 2 isoforms of the human protein are produced by alternative splicing. Protein type: DNA repair, damage Chromosomal Location of Human Ortholog: 17q22 Cellular Component: condensed nuclear chromosome; cytoplasm; mitochondrion; nucleoplasm; nucleus; perinuclear region of cytoplasm; replication fork Molecular Function: ATP binding; crossover junction endodeoxyribonuclease activity; DNA binding; DNA-dependent ATPase activity; double-stranded DNA binding; four-way junction DNA binding; protein binding; recombinase activity; single-stranded DNA binding Biological Process: blood coagulation; DNA recombinase assembly; DNA recombination; DNA repair; DNA synthesis during DNA repair; double-strand break repair via homologous recombination; female meiosis sister chromatid cohesion; male meiosis I; meiotic recombination; mitotic recombination; response to ionizing radiation; sister chromatid cohesion; spermatogenesis; strand displacement; strand invasion; telomere maintenance via recombination Disease: Breast-ovarian Cancer, Familial, Susceptibility To, 3; Fanconi Anemia, Complementation Group O; Tracheoesophageal Fistula With Or Without Esophageal Atresia
Research Articles on RAD51C	**1.** a mutation analysis in 171 high-risk BRCA1 and BRCA2 negative ovarian cancer patients, to evaluate the frequency of hereditary RAD51C and RAD51D variants in Czech population, is reported.
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