

Recombinant Human RAD51, His-tagged

Cat. No. RAD51-29580TH **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant full length human RAD51 with His tag. Estimated MW 37 kDa.
Species	Human
Source	E.coli
Description	The protein encoded by this gene is a member of the RAD51 protein family. RAD51 family members are highly similar to bacterial RecA and <i>Saccharomyces cerevisiae</i> 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.
Conjugation	HIS
Tissue specificity	Highly expressed in testis and thymus, followed by small intestine, placenta, colon, pancreas and ovary. Weakly expressed in breast.
Form	Liquid

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Purity	>95% by SDS-PAGE
Storage buffer	Preservative: None Constituents: 20% Glycerol, 20mM Tris HCl, 100mM Potassium chloride, 1mM DTT, 0.2mM EDTA, pH 8.0
Storage	Shipped on dry ice. Upon delivery aliquot and store at -80oC. Avoid freeze / thaw cycles.
Sequence Similarities	Belongs to the RecA family. RAD51 subfamily. Contains 1 HhH domain.
Full Length	Full L.

GENE INFORMATION

Gene Name	RAD51 RAD51 homolog (S. cerevisiae) [Homo sapiens]
Official Symbol	RAD51
Synonyms	RAD51; RAD51 homolog (S. cerevisiae); RAD51 (S. cerevisiae) homolog (E coli RecA homolog) , RAD51 homolog (RecA homolog, E. coli) (S. cerevisiae) , RAD51A, RECA; DNA repair protein RAD51 homolog 1; BRCA1/BRCA2 containing complex; subunit 5; BRCC5; HsRad5
Gene ID	5888
mRNA Refseq	NM_001164269
Protein Refseq	NP_001157741
MIM	179617

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Uniprot ID	Q06609
Chromosome Location	15q15.1
Pathway	Assembly of the RAD51-ssDNA nucleoprotein complex, organism-specific biosystem; BARD1 signaling events, organism-specific biosystem; DNA Repair, organism-specific biosystem; Double-Strand Break Repair, organism-specific biosystem; Fanconi anemia pathway, organism-specific biosystem;
Function	ATP binding; ATP binding; DNA-dependent ATPase activity; damaged DNA binding; double-stranded DNA binding;