Recombinant Full Length Human RAD51

Cat. No. RAD51-134H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	The Active Full Length Human Rad51 protein was extensively purified from E. coli, which overexpressed the human Rad51 protein as a recombinant protein. Following the removal of the tag from the recombinant protein (though it retains Gly-Ser-His at the N-terminal), it has demonstrated maintained nuclear filament-forming and strand-exchange activities, along with an interaction capability with Rad52. This product has been verified to exhibit ATPase activity stimulated by single-strand DNA.
Species	Human
Source	E.coli
ProteinLength	1-339 aa
Description	Human Rad51 protein is a functional and structural homolog of E. coli RecA protein, which plays a major role in genetic recombination and recombination repair by mediating strand exchange reaction between homologous DNA strands. Rad51 functionally and physically interacts with its paralogs Dmc1, Rad51B, Rad51C, Rad51D, Xrcc2 and Xrcc3, and also with Rad52 in recombination processes. It also interacts with oncogene proteins and tumor suppressors such as BRCA1, BRCA2, and P53 for the maintenance of genome stability.
Form	20 mM Tris-HCl pH8.0, 100 mM KCl, 1 mM DTT, 0.5 mM EDTA, 10% glycerol
Purity	>95% as judged from SDS-PAGE analysis

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Applications	1) Studies on homologous recombination in mammals including human 2) Studies on the interaction of Rad51 protein with various proteins 3) To be used as a standard for Western blotting
Storage	Sent at 4℃ or with dry-ice. Store at -80℃ for long period.

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; HsRad51; HsT16930; RAD51 homolog A; RecA-like protein; recombination protein A; RecA, E. coli, homolog of; RAD51 homolog (RecA homolog, E. coli); BRCA1/BRCA2-containing complex, subunit 5; RECA; MRMV2; HRAD51; RAD51A;
Gene ID	5888
mRNA Refseq	NM_001164269
Protein Refseq	NP_001157741
MIM	179617
UniProt ID	Q06609
Chromosome	15q15.1

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Location	
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; Fanconi anemia pathway, conserved biosystem; Homologous DNA pairing and strand exchange, organism-specific biosystem;
Function	ATP binding; ATP binding; DNA-dependent ATPase activity; damaged DNA binding; double-stranded DNA binding; double-stranded DNA binding; identical protein binding; nucleoside-triphosphatase activity; nucleotide binding; protein C-terminus binding; protein binding; single-stranded DNA binding; single-stranded DNA-dependent ATPase activity;

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