Recombinant Human RAD51

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

Specification

Product Overview
Rad51 protein was highly purified from E. coli over-expressing human Rad51 protein as a recombinant protein. Since the tag was removed from the recombinant protein (it still contains Gly-Ser-His at the N-terminal), it has been shown to retain nuclear filament forming and strand-exchange activity as well as interaction with Rad52. This product was confirmed to possess single strand DNA stimulated ATPase activity.

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.

Source
E. coli

Species
Human

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

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

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<table>
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<tr>
<th><strong>Protein Refseq</strong></th>
<th>NP_001157741</th>
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<td><strong>MIM</strong></td>
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<td><strong>UniProt ID</strong></td>
<td>Q06609</td>
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<tr>
<td><strong>Chromosome</strong></td>
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<tr>
<td><strong>Location</strong></td>
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<tr>
<td><strong>Pathway</strong></td>
<td>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;</td>
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<tr>
<td><strong>Function</strong></td>
<td>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;</td>
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