

## Recombinant Mouse Rad54l Protein, Myc/DDK-tagged

Cat. No. Rad54l-5352M Lot. No. (See product label)

### SPECIFICATION

<b>Product Overview</b>	Purified recombinant protein of mouse full-length RAD54 like ( <i>S. cerevisiae</i> ) (Rad54l), with C-terminal MYC/DDK tag, expressed in HEK293T cells.
<b>Species</b>	Mouse
<b>Source</b>	HEK293
<b>Description</b>	<p>Plays an essential role in homologous recombination (HR) which is a major pathway for repairing DNA double-strand breaks (DSBs), single-stranded DNA (ssDNA) gaps, and stalled or collapsed replication forks. Acts as a molecular motor during the homology search and guides RAD51 ssDNA along a donor dsDNA thereby changing the homology search from the diffusion-based mechanism to a motor-guided mechanism. Plays also an essential role in RAD51-mediated synaptic complex formation which consists of three strands encased in a protein filament formed once homology is recognized. Once DNA strand exchange occurred, dissociates RAD51 from nucleoprotein filaments formed on dsDNA. Deficiency also resulted in an increased frequency of end-to-end chromosome fusions involving telomeres compared to the controls, suggesting a putative role in telomere capping. Non-homologous end joining (NHEJ) and homologous recombination (HR) represent the two major pathways of DNA double-strand break (DSB) repair in eukaryotic cells. LIG4 and RAD54L cooperate to support cellular proliferation, repair spontaneous DSBs, and prevent chromosome and single chromatid aberrations.</p>
<b>Molecular Mass</b>	84.7 kDa

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<b>Purity</b>	> 80% as determined by SDS-PAGE and Coomassie blue staining
<b>Stability</b>	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
<b>Storage</b>	Store at -80 centigrade after receiving vials.
<b>Concentration</b>	>50 µg/mL as determined by microplate BCA method
<b>Storage Buffer</b>	25 mM Tris.HCl, pH 7.3, 100 mM glycine, 10% glycerol.

## GENE INFORMATION

<b>Gene Name</b>	Rad54l RAD54 like ( <i>S. cerevisiae</i> ) [ <i>Mus musculus</i> (house mouse) ]
<b>Official Symbol</b>	Rad54l
<b>Synonyms</b>	RAD54L; RAD54 like ( <i>S. cerevisiae</i> ); DNA repair and recombination protein RAD54-like; mHR54; mRAD54; RAD54 homolog; RAD54
<b>Gene ID</b>	19366
<b>mRNA Refseq</b>	NM_001122958
<b>Protein Refseq</b>	NP_001116430
<b>UniProt ID</b>	P70270

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