

Recombinant Mouse Rad54l Protein, Myc/DDK-tagged

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

SPECIFICATION

Product Overview	Purified recombinant protein of mouse full-length RAD54 like (<i>S. cerevisiae</i>) (Rad54l), with C-terminal MYC/DDK tag, expressed in HEK293T cells.
Species	Mouse
Source	HEK293
Description	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.
Molecular Mass	84.7 kDa

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

GENE INFORMATION

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

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