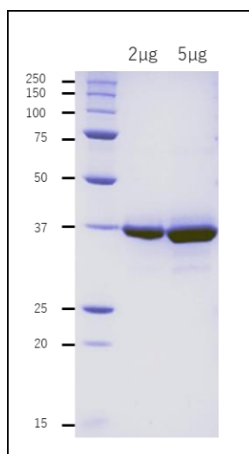


## Rad51 protein (human), functional

<b>Product code</b>	10-001                  10-002
<b>Size</b>	20 µg                          100 µg
<b>Storage</b>	-80°C. Avoid freeze-thaw cycles.
<b>Product Description</b>	Rad51 protein was highly purified from E. coli over-expressing human Rad51 protein as a recombinant protein (Fig. 1). The tag was removed from the recombinant protein (it still contains Gly-Ser-His at the N-terminal)
<b>Concentration</b>	1.0 mg/ml
<b>Buffer</b>	20 mM Tris-HCl pH8.0, 100 mM KCl, 1 mM DTT, 0.5 mM EDTA, 10% glycerol
<b>Purity</b>	> 95% as judged from SDS-PAGE analysis (Fig.1)
<b>Application</b>	<ol style="list-style-type: none"> <li>1. Studies on homologous recombination in mammals including human</li> <li>2. Studies on the interaction of Rad51 protein with various proteins</li> <li>3. To be used as a standard for Western blotting</li> </ol>
<b>Special notes</b>	For research use only, not for human use.
<b>Background</b>	<p>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.</p> <p>Rad51 protein was highly purified from E. coli over-expressing human Rad51 protein as a recombinant protein (Fig. 1). 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 (1). This product was confirmed to possess single strand DNA binding activity stimulated by ATP.</p>
<b>Data Link</b>	UniProtKB <a href="#">Q06609</a> (RAD51_HUMAN)
Please note: All products are FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES. NOT FOR MILITARY USE.	

**Data Images:** 10-001, 10-002 Rad51 protein (human), functional



**Fig.1. Purified human Rad51 protein. SDS-PAGE**

**References:** This product was used in the following publications.

1. Kurumizaka H *et al* "Human Rad51 amino acid residues required for Rad52 binding." *J Mol Biol* 291: 537-548 (1999) PMID: [10448035](#)
2. Murayama Y *et al* "Formation and branch migration of Holliday junctions mediated by eukaryotic recombinases." *Nature* 451:1018-1021 (2008) PMID: [18256600](#)

**Related Products:**

- 70-001 70-002 Anti-Rad51 (Human) antibody, rabbit serum
- 70-005 Anti-Rad51 (Human) antibody, chicken polyclonal (IgY)
- 70-012 Anti-Rad51 (Human) antibody, rabbit polyclonal
- 01-001 E. coli RecA Protein
- 10-003 Rad52 (human) Protein
- 61-003 61-004 Anti-E.coli RecA antibody, rabbit polyclonal
- 62-101 Anti-Rad51(*S. cerevisiae*) antibody, rabbit polyclonal
- 63-001 Anti-Rhp51 (*S.pombe*) antibody, rabbit serum