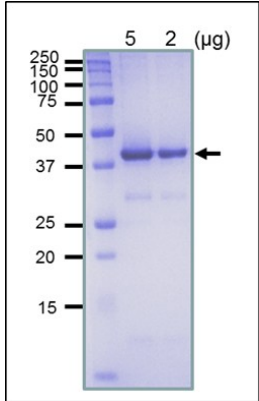


E. coli RecA protein, Functional

Product code	01-001
Size	100 µg
Storage	-20°C -80°C (for longer storage) Avoid freeze-thaw cycles
Product Description	The product is over-expressed as a full-size recombinant RecA without tag and highly purified by several steps of chromatography. A single band is observed by SDS-PAGE at 38 kD (Fig.).
Concentration	1.0 mg/ml
Buffer	50% glycerol, 10 mM Tris-HCl (pH 8.0), 1 mM EDTA, 150 mM KCl, 1 mM DTT
Purity	Over 90% by SDS-PAGE
Application	<ol style="list-style-type: none"> 1. Studies on homologous recombination mechanism and SOS response. 2. Useful in the screening using probe from library by promotion of DNA hybridization (1). 3. Facilitate DNA observation by electron microscope due to nucleofilament formation with DNA.
Background	<i>E. coli</i> RecA protein is a very important enzyme for homologous recombination and recombinational repair. Its synthesis is induced by SOS response caused by DNA damage. RecA protein has multiple functions such as single stranded DNA dependent ATPase activity, DNA annealing activity, formation of D-loop and Holliday structure in homologous recombination reaction, and coprotease activities that promote self-cleavages of LexA repressor, lambda phage repressor and UmuD protein. RecA protein binds to single and double stranded DNA for nucleofilament formation. It carries out a central role in homologous recombination. Its homologs in eukaryotes are Rad51 protein and Dmcl protein (2).
Image	 <p>Figure SDS-polyacrylamide gel electrophoresis of purified recombinant RecA protein</p>
Data Link	UniProtKB: P0A7G6 (RECA_ECOLI)
Please note: All products are FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES. NOT FOR MILITARY USE.	

References: 01-001 *E. coli* RecA Protein

This protein was used in the following publications.

1. Horii T et al. Regulation of SOS functions: purification of *E. coli* LexA protein and determination of its specific site cleaved by the RecA protein [Cell](#). 27:515-22. (1981) PMID: [6101204](#) **Promotion of LexA protein by RecA**
2. Hishida T. et al. Uncoupling of the ATPase activity from the branch migration activity of RuvAB protein complexes containing both wild-type and ATPase-defective RuvB proteins. *Genes Cells*. 8: 721-30. (2003) PubMed [12940820](#)
RecA-mediated strand exchange

Related product:

61-003 Anti-*E.coli* RecA antibody, rabbit polyclonal