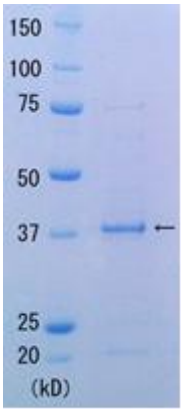
Thermus aquaticus RecA Protein, Functional

Product code	02-048
Size	100 µg
Storage	-20℃
Product Description	Recombinant *Thermus aquaticus* RecA protein expressed in *E. coli*. and the protein was highly purified. Full-size, functional and no Tag-peptide attached. MW is 36.5kD.
Concentration	1.0 mg/ml
Buffer	50mM Tris-HCl (pH 8.0), 200mM NaCl, 1mM EDTA, 50% glycerol
Purity	More than 90% as judged from SDS-PAGE. No end- and exo-nuclease activity
Activity	The activity of single-stranded DNA-dependent ATPase was confirmed.
Application	1. Useful for studying homologous recombination 2. Increase the specificity and yield of multiplex PCR (of cDNA or genomic DNA) by promoting homologous annealing of primers to target DNA (2) 3. Visualization of DNA with electoron microscopy due to nucleofilament formation.
Background	*Thermus aquaticus* RecA protein is a thermostable enzyme which plays important roles in homologous recombination and DNA repair. This protein has activities of single-stranded DNA dependent ATPase, DNA annealing, and exchanging of strands between two recombining DNA double helices, similar to *E.coli* RecA protein, but the optimal temperature is between 65~75℃ (1).
Data Image	 Figure. SDS-PAGE Analysis of *Thermus aquaticus* RecA protein
Data Link	UniProtKB/Swiss-Prot P48296 (RECA_THEAQ)
References	This product has been used in the following publication. 1.Hosoda et al. Combination of Reverse Transcription and Multienzyme Restriction Fragment Length Polymorphism Analysis for Rapid Detection of Escherichia Coli, J Microb Biochem Technol 2013, 6:1 Useful References 1. Angov E & Camerini-Otero RD (1994) "The recA gene from the thermophile Thermus aquaticus YT-1: cloning, expression, and characterization." *J.Bacteriol.* **176**: 1405-1412 PMID: 8113181 2. Shigemori Y et al (2005) "Multiplex PCR: use of heat-stable *Thermus thermophilus* RecA protein to minimize non-specific PCR products." *Nucleic Acids Research* **33**: *e126* PMID: 16087733
Related product	01-001 E.coli RecA protein 10-001 Rad51 protein (human) 10-003 Rad52 protein (human)

Please note: All products are FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES. NOT FOR MILITARY USE.

BioAcademia,Inc. Tel. 81-6-6877-2335 Fax. 81-6-6877-2336 info@bioacademia.co.jp https://www.bioacademia.co.jp/en/