

***Thermus aquaticus* RecA Protein, Functional**

02-048 100 µg

Shipping and Storage: Ship at 4°C and store at -20°C

Product: Recombinant *Thermus aquaticus* RecA protein expressed in *E. coli*. Full-size, functional and no Tag-peptide attached.

Applications:

- 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 electron microscopy due to nucleofilament formation.

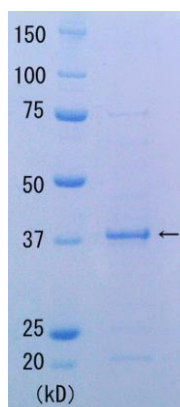
Activity: The activity of single-stranded DNA-dependent ATPase was confirmed.

Form: 1 mg/ml in 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

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°C (1). Taq RecA was expressed in *E. coli* in large quantities and the protein was highly purified. MW is 36.5kD.

Data Link: UniProtKB/Swiss-Prot [P48296](#) (RECA_THEAQ) [P48296](#)



**Figure. SDS-PAGE Analysis of
Thermus aquaticus RecA protein**

Reference: 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 products:

[01-001](#) E.coli RecA Protein

[10-001](#) Rad51 Protein (human)

[10-003](#) Rad52 Protein (human)