

***Thermus aquaticus* RecA Protein**

02-048 100 ug

***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.

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.

Form: 1 mg/ml in 50mM Tris-HCl (pH 8.0), 200mM NaCl, 1mM EDTA, 50% glycerol

Store: at -20°C

Activity:

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

Quality Assurance: Single-strand dependent ATPase activity.

Greater than 90% of protein determined by SDS-PAGE (CBB staining) (Fig.1)

The absence of endonucleases and exonucleases was confirmed.

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

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](#)

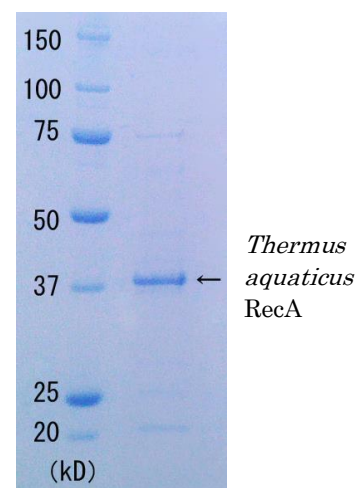


Fig.1 SDS-PAGE of *Thermus aquaticus* RecA protein

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