

***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 then 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.

Specification

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

Store: -20°C

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

Quality: Single-strand dependent ATPase activity. Greater than 90% of protein determined by SDS-PAGE (Fig. 1 CBB staining). 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](#)

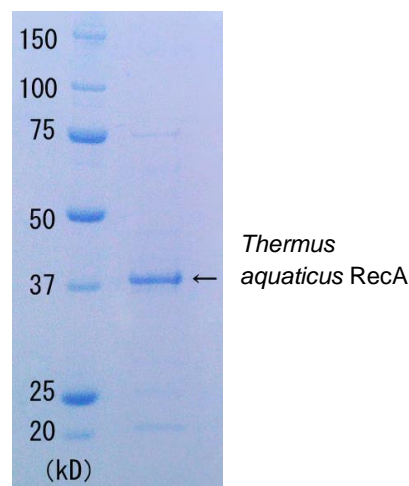


Fig. 1 SDS-PAGE of *Thermus aquaticus* RecA protein

Related products: #01-001 *E. coli* RecA Protein, #10-001 Rad51 Protein (human), #10-003 Rad52 Protein (human)

Distributed by AS ONE International, Inc.