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℃ (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 electoron 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℃

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

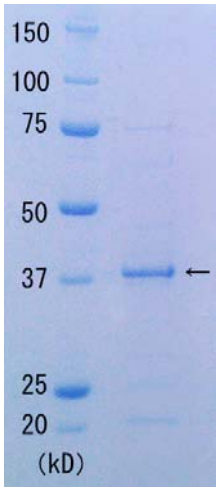

Fig.1 SDS-PAGE of *Thermus aquaticus* RecA protein

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

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