Thermus aquaticus RecA Protein, Functional

02-048 100 ug

Shipping and Storage: Ship at 4℃ and store at -20℃

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 electoron 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℃ (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

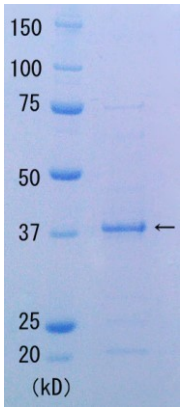

Figure. SDS-PAGE Analysis of *Thermus aquaticus* RecA protein

Rererence: 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

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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)**