Bio Academia
Manufacturer

AS ONE

E. coli RuvA Protein, functional

Cat.# 01-007, Size: 20 µg ; Cat.# 01-008, Size: 100 µg

Background:

E. coli RuvA protein binds specifically to the Holliday structure which is the intermediate of recombination at the late stage of homologous recombination and recombination repair and forms a complex with RuvB motor protein allowing the migration of Holliday junction using ATP hydrolysis energy and expands the heteroduplex region. In solution, it forms a tetramer and binds to the cross-like DNA of the Holliday junction from below and above holding it in between (1, 2).

The molecular weight of the monomer is 22 kD.

Specifications:

- Form: 50% glycerol, 10 mM Tris-HCl (pH7.5), 2 mM EDTA, 100 mM NaCl, 5 mM mercaptoethanol
- Purity: RuvA protein over 90% by SDS-PAGE (CBB staining)
- Concentration: 2.7 mg/ml (determined by BCA method)
- Storage: Ship at 4℃ or -20℃. Spin-down and store at -20℃ or -80℃ for longer period.

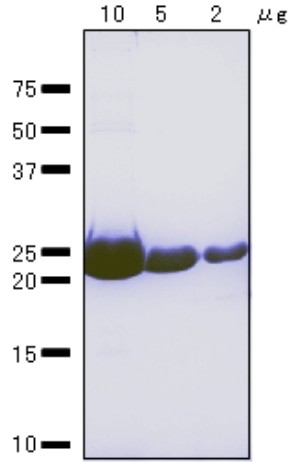

Figure SDS-Polyacrylamide gel electrophoresis of RuvA protein. 22.1 kDa

Applications

1. Functional as Holliday junction specific binding protein, which promotes Holliday-junction branch migration in combination with RuvB protein.
2. For SNP analysis (*Genome Research* **13**:1754-1764 PMID: 12840050).

DataLink UniProtKB/Swiss-Prot **P0A809** (RUVA_ECOL)

References: This protein has been used in the following publications

1. Han YW et al (2006) Direct observation of DNA rotation during branch migration of Holliday junction DNA by Escherichia coli RuvA-RuvB protein complex. Proc Natl Acad Sci U S A. 2006 Aug 1;103(31):11544-8. PMID: 16864792 **Functional**
2. Iwasaki H et al (1992) Escherichia coli RuvA and RuvB proteins specifically interact with Holliday junctions and promote branch migration. *Genes Dev* **6**:2214-2220 PMID: 1427081 **Functional**

Related Products:

01-009 *E.coli* RuvB protein 01-011 *E.coli* RuvC protein 61-005 anti-RuvA antibody

61-007 anti-RuvB antibody, rabbit polyclonal 61-009 anti-RuvC antibody