



***E. coli* RuvA Protein, functional**

***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 product is a recombinant protein abundantly expressed by *E. coli* and purified by methods such as chromatography (Fig. 1). The molecular weight is 22 kD and even in solution, it binds to the Holliday structure and form a tetramer.

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](#)).

Purity: RuvA protein over 90% by SDS-PAGE (CBB staining)

Concentration: 2.7 mg/ml (determined by BCA method)

Form: 50% glycerol, 10 mM Tris-HCl (pH7.5), 2 mM EDTA, 100 mM NaCl, 5 mM mercaptoethanol

Size: 20 ug

Storage: -20°C

DataLink UniProtKB/Swiss-Prot [P0A809](#) (RUVA_ECOLI)

References: This product 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.* 103:11544-8.
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**

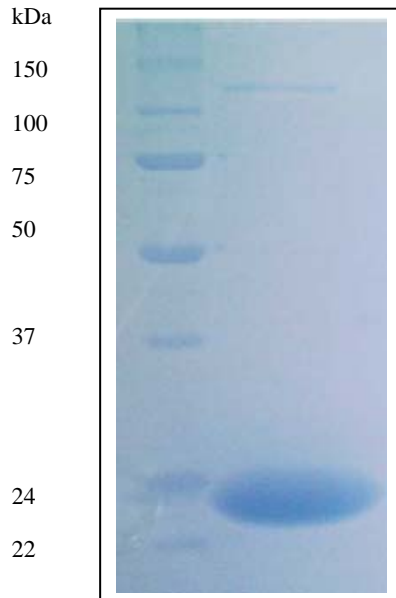


Fig.1 Polyacrylamide gel electrophoresis of RuvA protein.

Related Products:

[01-009EX](#) *E.coli* RuvB protein

[01-011EX](#) *E.coli* RuvC protein

[61-005EX](#) anti-RuvA antibody, rabbit polyclonal

[61-007EX](#) anti-RuvB antibody, rabbit polyclonal

[61-009EX](#) anti-RuvC antibody, rabbit polyclonal

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