E. coli RuvA Protein

01-007 20 ug, 01-008 100 ug

***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) Studies on homologous recombination mechanism.
2) For SNP analysis (3).
3) Incorporation to DNA circuit.
4) Recognition and identification of cross-like DNA.

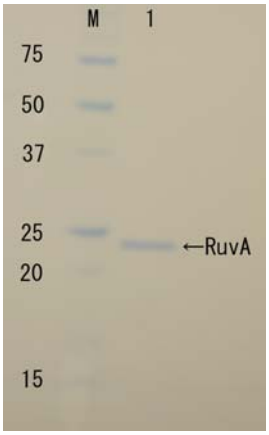

Fig.1 Polyacrylamide gel electrophoresis of RuvA protein.

Specification

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

Storage: -20℃

DataLink UniProtKB/Swiss-Prot P0A809 (RUVA_ECOLI)

References

1. Shinagawa H and Iwasaki H (1996) "Processing the holliday junction in homologous recombination." *Trend Biochem. Sci.* **21**:107-111 PMID: 8882584
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
3. Yang Q *at al* (2003) "Allele-specific Holliday junction formation: a new mechanism of allelic discrimination for SNP scoring." *Genome Research* **13**:1754-1764 PMID: 12840050

Related Products:

01-009 ***E.coli* RuvB protein**

01-011 ***E.coli* RuvC protein**

61-005 **anti-RuvA antibody, rabbit polyclonal**

61-007 **anti-RuvB antibody, rabbit polyclonal**

61-009 **anti-RuvC antibody, rabbit polyclonal**