



## ***E. coli* RuvB Protein, functional**

***E. coli* RuvB protein** forms a complex with RuvA protein at the late stage of homologous recombination and recombination repair and binds specifically to the Holliday structure which is the intermediate of recombination, allowing the migration of Holliday junction using ATP hydrolysis energy and expands the heteroduplex region. **RuvB** forms a hexamer ring structure and surrounds the double chain DNA and covers RuvA tetramer bound to the Holliday junction from both sides. **RuvB** is a DNA motor protein which possesses the ATPase activity, activated by DNA and RuvA protein (1, 2). Its molecular weight is 37 kD and forms a dimer in solution in the physiological condition. .

### **Applications**

- 1) Functional studies in vitro; RuvA and RuvB form a complex that promotes Holiday junction ( a recombination intermediatae) branch-migration by using ATP hydrolysis energy (Ref.2). RuvB also has ATPase activity which is stimulated by RuvA and DNA.
- 2) SDS-PAGE (0.2 ug/lane)
- 3) Standard antigen for western blotting and ELISA

**Product:** Full-length recombinant protein expressed in E.coli and highly purified by combined chromatography.

RuvB protein is over 90% by SDS-PAGE (CBB staining)

**Concentration:** 1.0 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:** Sent at 4°C or at -20°C and upon arrival, centrifuge briefly and store at -20°C or -80°C for longer period

**Size:** 20 ug

**Data Link** UniProtKB/Swiss-Prot [P0A812](#) (RUVB\_ECOLI)

**References:** This product has been used in Ref 2.

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](#)



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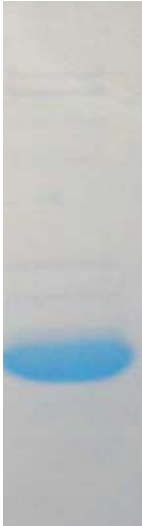


Fig.1 Polyacrylamide gel  
electrophoresis of RuvB  
protein.

**Related Products:**

[01-007EX](#) *E.coli* RuvA 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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