

Product datasheet

Recombinant *E. coli* RuvA protein (Active) ab63819

1 Image

Description

Product name	Recombinant <i>E. coli</i> RuvA protein (Active)
Purity	> 90 % SDS-PAGE. purified by methods such as chromatography
Expression system	Escherichia coli
Protein length	Full length protein
Animal free	No
Nature	Recombinant
Species	Escherichia coli

Specifications

Our [Abpromise guarantee](#) covers the use of **ab63819** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	SDS-PAGE Functional Studies
Form	Liquid
Additional notes	This protein may be suitable for the following applications. 1) Studies on homologous recombination mechanism. 2) For SNP analysis. 3) Incorporation to DNA circuit. 4) Recognition and identification of cross-like DNA.

Preparation and Storage

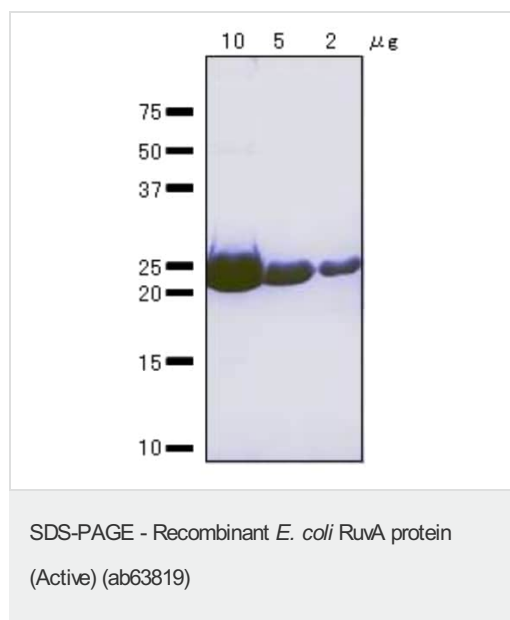
Stability and Storage	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles. pH: 6 Constituents: 0.039% Beta mercaptoethanol, 0.158% Tris HCl, 0.0584% EDTA, 50% Glycerol (glycerin, glycerine), 0.58% Sodium chloride This product is an active protein and may elicit a biological response in vivo, handle with caution.
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General Info

Relevance

In *Escherichia coli*, the RuvA, RuvB and RuvC proteins are required for the late stages of homologous recombination and DNA repair. They are involved in processing the Holliday junction during homologous recombination. RuvA protein binds to both single-stranded and double-stranded DNA. RuvB protein has weak ATPase activity. RuvA bound to DNA greatly enhances ATPase activity of RuvB. UV-irradiation to supercoiled DNA further enhances the stimulatory effect of RuvA on the RuvB ATPase activity. In the presence of ATP the RuvA-RuvB complex has an activity that renatures cruciform structures formed by heating and gradually cooling supercoiled DNA with an inverted repeat. RuvA and RuvB promote branch migration whereas RuvC resolves junctions by endonucleolytic cleavage. Moreover RuvAB stimulate Holliday junction resolution by RuvC. The RuvA-RuvB complex interacts with an irregular conformation in damaged DNA and induces conformational changes in DNA using energy provided by ATP hydrolysis, so that it facilitates DNA repair, recombination and error prone replication. RuvABC proteins are responsible for the occurrence of DSBs at arrested replication forks. In cells proficient for RecBC, RuvAB is uncoupled from RuvC and DSBs may be prevented.

Images



SDS-PAGE analysis of Recombinant *E. coli* RuvA protein (ab63819).

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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