abcam

Product datasheet

Recombinant E. coli RuvB protein (Active) ab63827

2 Images

Description

Product name	Recombinant E. coli RuvB 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
Description	Recombinant *E. coli* RuvB protein (Active)

Specifications

Our **Abpromise guarantee** covers the use of **ab63827** 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 Western blot ELISA
Form	Liquid
Additional notes	This protein can be used for:- 1) Studies on homologous recombination mechanism. 2) To make use of the motor protein function that specifically migrates the Holliday junction by forming a complex with RuvA (branch-migration protein).

Preparation and Storage

Stability and Storage	Shipped at 4°C. Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle. pH: 6 Constituents: 0.039% Beta mercaptoethanol, 0.158% Tris HCl, 0.0584% EDTA, 50% Glycerol (glycerin, glycerine), 0.58% Sodium chloride

General Info

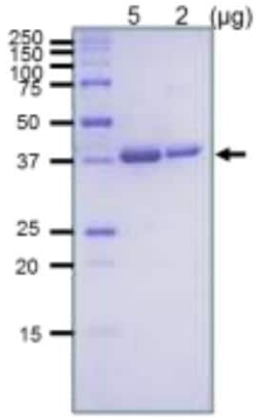
Relevance

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.

Cellular localization

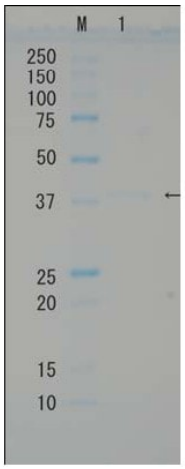
Cell Membrane, Cytoplasmic and Nuclear

Images



SDS-PAGE - Recombinant *E. coli* RuvB protein (Active) (ab63827)

SDS-PAGE analysis of Recombinant *E. coli* RuvB protein (ab63827).



SDS-PAGE - Recombinant *E. coli* RuvB protein (Active) (ab63827)

SDS Page analysis of ab63827

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