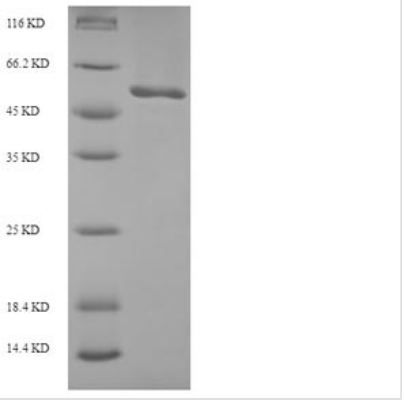
Recombinant Escherichia coli DNA replication and repair protein RecF (recF)

Product Code	CSB-EP358973ENV
Relevance	The RecF protein is involved in DNA metabolism; it is required for DNA replication and normal SOS inducibility. RecF binds preferentially to single-stranded, linear DNA. It also ses to bind ATP.
Abbreviation	Recombinant E.coli recF protein
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	P0A7H0
Product Type	Recombinant Protein
Immunogen Species	Escherichia coli (strain K12)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	SLTRLLIRDFRNIETADLALSPGFNFLVGANGSGKTSVLEAIYTLGHGRAFRSLQ IGRVIRHEQEAFVLHGRLQGEERETAIGLTKDKQGDSKVRIDGTDGHKVAELA HLMPMQLITPEGFTLLNGGPKYRRAFLDWGCFHNEPGFFTAWSNLKRLLKQR NAALRQVTRYEQLRPWDKELIPLAEQISTWRAEYSAGIAADMADTCKQFLPEF SLTFSFQRGWEKETEYAEVLERNFERDRQLTYTAHGPHKADLRIRADGAPVE DTLSRGQLKLLMCALRLAQGEFLTRESGRRCLYLIDDFASELDDERRGLLASR LKATQSQVFVSAISAEHVIDMSDENSKMFTVEKGKITD
Research Area	Others
Source	E.coli
Target Names	recF
Protein Names	Recommended name: DNA replication and repair protein recF
Expression Region	2-357aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-SUMO-tagged
Mol. Weight	56.4kDa
Protein Length	Full Length of Mature Protein
Image	



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

Amino acids 2-357 form the expressed segment for recombinant Escherichia coli (strain K12) recF. The theoretical molecular weight of the recF protein is 56.4 kDa. Expression of this recF protein is conducted in e.coli. The N-terminal 6xHis-SUMO tag was smoothly integrated into the coding gene of recF, which enables a simple process of detecting and purifying the recF recombinant protein in the following steps.

The Escherichia coli DNA replication and repair protein RecF plays a crucial role in maintaining genomic integrity by participating in various aspects of DNA metabolism. RecF is involved in the restart of stalled DNA replication forks and the repair of DNA damage, particularly in situations where single-stranded DNA regions are generated. It forms a complex with RecR and RecO, collectively known as the RecFOR complex, which mediates the loading of RecA onto single-stranded DNA. RecA, in turn, promotes the strand exchange between single-stranded and double-stranded DNA, facilitating repair processes such as homologous recombination. RecF is essential for the cell's ability to respond to DNA damage, ensuring accurate and faithful DNA repair and replication. Understanding the functions of RecF is fundamental for unraveling the intricacies of bacterial DNA repair mechanisms and has implications for the development of antibacterial strategies targeting essential cellular processes.

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

Shelf Life

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