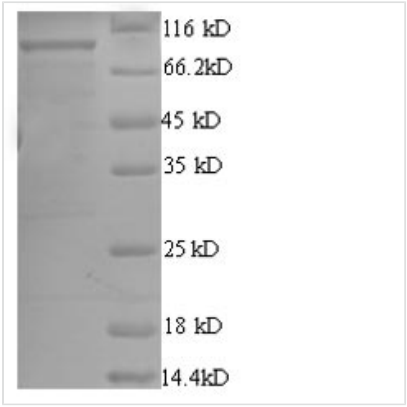
Recombinant Escherichia coli ATP-dependent DNA helicase rep (rep)

Product Code	CSB-RP095644Ba
Relevance	Rep helicase is a single-stranded DNA-dependent ATPase involved in DNA replication; it can initiate unwinding at a nick in the DNA. It binds to the single-stranded DNA and acts in a progressive fashion along the DNA in the 3' to 5' direction.
Abbreviation	Recombinant E.coli rep 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.	P09980
Product Type	Recombinant Protein
Immunogen Species	Escherichia coli (strain K12)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	MRLNPGQQQAVEFVTGPCLVLAGAGSGKTRVITNKIAHLIRGCGYQARHIAAV TFTNKAAREMKERVGQTLGRKEARGLMISTFHTLGLDIIKREYAALGMKANFSL FDDTDQLALLKELTEGLIEDDKVLLQQLISTISNWKNDLKTPSQAAASAIGERDR IFAHCYGLYDAHLKACNVLDFDDLILLPTLLLQRNEEVRKRWQNKIRYLLVDEY QDTNTSQYELVKLLVGSRARFTVVGDDDQSIYSWRGARPQNLVLLSQDFPAL KVIKLEQNYRSSGRILKAANILIANNPHVFEKRLFSELGYGAELKVLSANNEEHE AERVTGELIAHHFVNKTQYKDYAILYRGNHQSRVFEKFLMQNRIPYKISGGTSF FSRPEIKDLLAYLRVLTNPDDDSAFLRIVNTPKREIGPATLKKLGEWAMTRNKS MFTASFDMGLSQTLSGRGYEALTRFTHWLAEIQRLAEREPIAAVRDLIHGMDY ESWLYETSPSPKAAEMRMKNVNQLFSWMTEMLEGSELDEPMTLTQVVTRFTL RDMMERGESEEELDQVQLMTLHASKGLEFPYVYMVGMEEGFLPHQSSIDED NIDEERRLAYVGITRAQKELTFTLCKERRQYGELVRPEPSRFLLELPQDDLIWE QERKVVSAEERMQKGQSHLANLKAMMAAKRGK
Research Area	Others
Source	E.coli
Target Names	rep
Expression Region	1-673aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal GST-tagged
Mol. Weight	104.0kDa
Protein Length	Full Length

Image



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

Description

The production of this Recombinant E.coli K12 MPL protein began at the genetic level, where the coding sequence for the MPL protein was first isolated and cloned into an expression plasmid vector. Recombinant DNA technology was used in the process. Next step was cloning. The expression vector must be introduced into the host cell (E.coli) so that the cells could be cultured and expressed the desired rep protein. And we finally got the recombinant rep protein with the purity of 90%+ determined by SDS-PAGE.

Extracellular adenosine triphosphate (ATPe) is an important signaling molecule, which regulates a wide range of cellular functions including cell proliferation, apoptosis, immune response, neurotransmission and, focus of our interest, the epithelial ion transport. In order to achieve these effects, ATP is released from cells in response to a number of stimuli including transmitter or hormone stimulation, shear stress, cell volume changes, hypoxia and release from damaged cells. Several ATP release mechanisms have been proposed to explain transport of ATP across the plasma membrane. One of the ATP releasing pathways is the regulated vesicular exocytosis, which occurs in neurons, endocrine cells and some exocrine cells, and constitutive vesicular transport. Other models of ATP release pathways include anion channels and transporters (e.g. maxi-anion channels, volumeregulated anion channels, cystic fibrosis transmembrane conductance regulator (CFTR)), multidrug resistance proteins, pannexin-1 and pannexin-1 in conjunction with the P2X7 receptor and connexin hemichannels.

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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