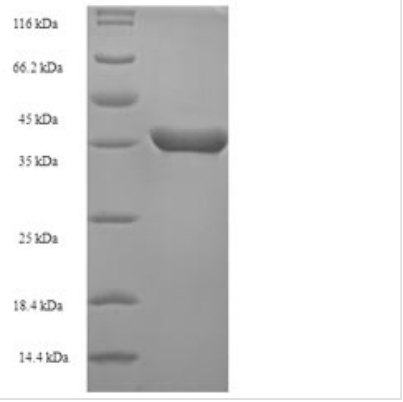
Recombinant Escherichia coli Peptide deformylase (def)

Product Code	CSB-EP017707ENV
Relevance	Roves the formyl group from the N-terminal Met of newly synthesized proteins. Requires at least a dipeptide for an efficient rate of reaction. N-terminal L-methionine is a prerequisite for activity but the enzyme has broad specificity at other positions.
Abbreviation	Recombinant E.coli def 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.	P0A6K3
Alias	Polypeptide deformylase
Product Type	Recombinant Protein
Immunogen Species	Escherichia coli (strain K12)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	SVLQVLHIPDERLRKVAKPVEEVNAEIQRIVDDMFETMYAEEGIGLAATQVDIH QRIIVIDVSENRDERLVLINPELLEKSGETGIEEGCLSIPEQRALVPRAEKVKIRA LDRDGKPFELEADGLLAICIQHEMDHLVGKLFMDYLSPLKQQRIRQKVEKLDRL KARA
Research Area	Others
Source	E.coli
Target Names	def
Protein Names	Recommended name: Peptide deformylase Short name= PDF EC= 3.5.1.88 Alternative name(s): Polypeptide deformylase
Expression Region	2-169aa
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	35.2kDa
Protein Length	Full Length of Mature Protein
Image	



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

Description

The preparation of this recombinant E.coli def protein was to use gene recombination DNA technology to obtain a recombinant vector connected with a def fragment (2-169aa) that could be translated into the def protein and then transferred it into E.coli cells to express the recombinant def protein molecule. In order to get the target protein with high purity, N-terminal 6xHis-SUMO tag was used in the production. The purity is 90% determined by SDS-PAGE.

Peptide deformylase catalyzes the hydrolytic removal of the N-terminal formyl group from nascent proteins. This is an essential step in bacterial protein synthesis, making PDF an attractive target for antibacterial drug development. Peptide deformylase activity was first reported by Adams in 1968. However, further attempts to purify the enzyme from cell lysates failed because the activity was not stable. The enzyme was not characterized further until the early 1990s, when the deformylase gene, def, was cloned and peptide deformylase was subsequently overexpressed in Escherichia coli. Bacterial peptide deformylase belongs to a new class of metallohydrolases that utilize an Fe2+ ion as the catalytic metal ion. The ferrous ion in peptide deformylase is very unstable and can be quickly and irreversibly oxidized to the ferric ion, resulting in an inactive enzyme.

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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