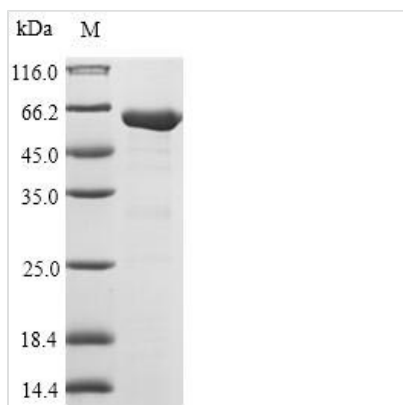


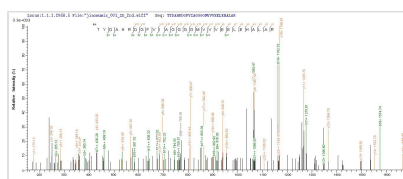


Recombinant Escherichia coli 3-oxoacyl-[acyl-carrier-protein] synthase 1 (fabB)

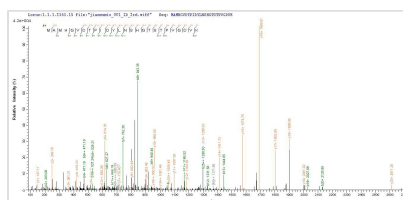
Product Code	CSB-EP359247ENV
Relevance	Catalyzes the condensation reaction of fatty acid synthesis by the addition to an acyl acceptor of two carbons from malonyl-ACP. Specific for elongation from C-10 to unsaturated C-16 and C-18 fatty acids.
Abbreviation	Recombinant E.coli fabB protein
Storage	The 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.	P0A953
Alias	3-oxoacyl-[acyl-carrier-protein] synthase I Beta-ketoacyl-ACP synthase I
Product Type	Recombinant Protein
Immunogen Species	Escherichia coli (strain K12)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	MKRAVITGLGIVSSIGNNQEVLASLREGRSGITFSQELKDSGMRSHVWGNVK LDTTGLIDRKVVRFMSDASIYAFLSMEQAIADAGLSPEAYQNNPRVGLIAGSGG GSPRFQVFGADAMRGPRGLKAVGPYVVTKAMASGVSACLATPFKIHGVNYSI SSACATSAHCIGNAVEQIQLGKQDIVFAGGGEELCWEMACEFDAMGALSTKY NDTPEKASRTYDAHRDGFVIAGGGGMVVVEELEHALARGAHIYAEIVGYGATS DGADMVAPSGEGAVRCMKMAMHGVDTPIDYLNHGTSTPVGDKELAAIREV FGDKSPAISATKAMTGHS LGAAGVQEAIYSLLMLEHGFIAPSINIEELDEQAAGL NIVTETTDRELTTVMSNSFGFGGTNATLVMRKLKD
Source	E.coli
Target Names	fabB
Expression Region	1-406aa
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 and C-terminal Myc-tagged
Mol. Weight	61.3kDa
Protein Length	Full Length
Image	



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



Based on the SEQUEST from database of E.coli host and target protein, the LC-MS/MS Analysis result of CSB-EP359247ENVa3 could indicate that this peptide derived from E.coli-expressed Escherichia coli (strain K12) fabB.



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Description

Amino acids 1-406 form the expressed segment for recombinant Escherichia coli (strain K12) fabB. This fabB protein is theoretically predicted to have a molecular weight of 61.3 kDa. The fabB protein was expressed in e.coli. The N-terminal 6xHis-SUMO tag and C-terminal Myc tag was smoothly integrated into the coding gene of fabB, which enables a simple process of detecting and purifying the fabB recombinant protein in the following steps.

3-oxoacyl-[acyl-carrier-protein] synthase 1 (FabB) in Escherichia coli is an essential enzyme involved in fatty acid biosynthesis, a critical cellular process for the production of phospholipids, lipopolysaccharides, and energy storage molecules. FabB catalyzes the condensation of malonyl-acyl carrier protein (ACP) with acetyl-CoA, leading to the elongation of fatty acid chains. This enzyme is part of the type II fatty acid synthesis system in bacteria, distinct from the eukaryotic type I system. The elongation of fatty acids is crucial for the formation of the lipid bilayer in bacterial membranes. Understanding the function of FabB is essential for unraveling bacterial lipid metabolism and can have implications for the development of antimicrobial agents targeting fatty acid biosynthesis.

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

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.