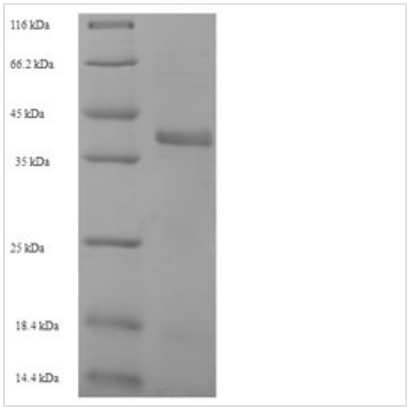
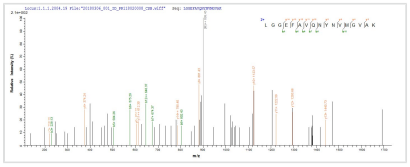
Recombinant Staphylococcus aureus Enoyl-[acyl-carrier-protein] reductase [NADPH] FabI (fabI)

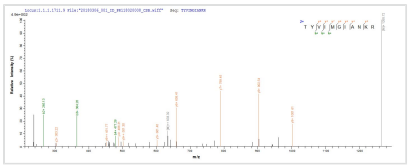
Product Code	CSB-EP750140SKV
Relevance	Catalyzes the reduction of a carbon-carbon double bond in an enoyl moiety that is covalently linked to an acyl carrier protein (ACP). Involved in the elongation cycle of fatty acid which are used in the lipid metabolism (By similarity).
Abbreviation	Recombinant Staphylococcus aureus fabI 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.	Q6GI75
Alias	NADPH-dependent enoyl-ACP reductase
Product Type	Recombinant Protein
Immunogen Species	Staphylococcus aureus (strain MRSA252)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	MLNLENKTYVIMGIANKRSIAFGVAKVLDQLGAKLVFTYRKERSRKELEKLLEQ LNQPEAHLYQIDVQSDEEVINGFEQIGKDVGNIDGVYHSIAFANMEDLRGRFSE TSREGFLLAQDISSYSLTIVAHEAKKLMPEGGSIVATTYLGGEFAVQNYNVMGV AKASLEANVKYLALDLGPDNIRVNAISAGPIRTLSAKGVGGFNTILKEIEERAPLK RNVDQVEVGKTAAYLLSDLSSGVTGENIHVDSGFHAIK
Research Area	Others
Source	E.coli
Target Names	fabI
Expression Region	1-256aa
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	44.0kDa
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-EP750140SKV could indicate that this peptide derived from E.coli-expressed Staphylococcus aureus (strain MRSA252) fabI.



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Description

The region for expressing recombinant Staphylococcus aureus (strain MRSA252) fabI contains amino acids 1-256. The theoretical molecular weight of the fabI protein is 44 kDa. This protein is generated in a e.coli-based system. Fusion of the N-terminal 6xHis-SUMO tag into the fabI encoding gene fragment was conducted, allowing for easier detection and purification of the fabI protein in subsequent stages.

Staphylococcus aureus Enoyl-[acyl-carrier-protein] Reductase [NADPH] FabI is a key enzyme in bacterial fatty acid biosynthesis. Its main function involves catalyzing the reduction of enoyl-ACP, a critical step in fatty acid elongation. FabI is essential for bacterial membrane biogenesis, making it a target for antibiotic research. Investigating FabI provides insights into bacterial physiology, antimicrobial resistance, and antibiotic development. Understanding its structure and mechanism aids in designing novel antibacterial agents. FabI research extends to the broader field of bacterial metabolism, offering potential applications in developing strategies to combat Staphylococcus aureus infections and addressing challenges related to antibiotic resistance in clinical settings.

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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