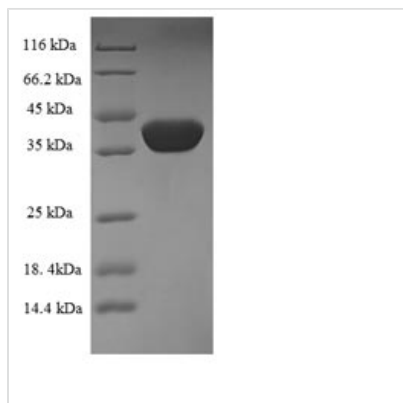


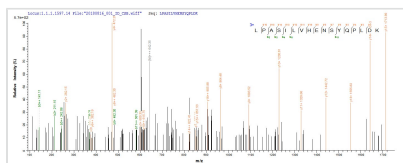


Recombinant Escherichia coli Oxygen-insensitive NADPH nitroreductase (nfsA)

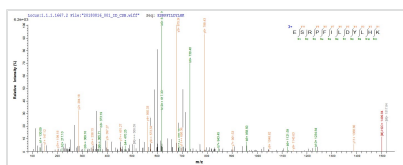
Product Code	CSB-EP323751ENV
Relevance	Reduction of nitroaromatic compounds using NADH. Reduces nitrofurazone by a ping-pong bi-bi mechanism possibly to generate a two-electron transfer product. Major component of the oxygen-insensitive nitroreductase activity in E.coli.
Abbreviation	Recombinant E.coli nfsA 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.	P17117
Alias	Modulator of drug activity A
Product Type	Recombinant Protein
Immunogen Species	Escherichia coli (strain K12)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	MTPTIELICGHRHSIRHFTDEPISEAQREAIINSARATSSSSFLQCSSIIRITDKALR EELVTLTGQKQKHAQAEEFWVFCADFNRHLQICPDAQLGLAEQLLLGVVDTA MMAQNALIAAESLGLGGVYIGGLRNNIEAVTKLLKLPQHVLPLFGLCLGWPADN PDLKPRLPASILVHENSYQPLDKGALAQYDEQLAEYYLTRGSNNRRDTWSDHI RRTIIKESRPFILDY LHKQGWATR
Research Area	Others
Source	E.coli
Target Names	nfsA
Expression Region	1-240aa
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	42.8kDa
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-EP323751ENV could indicate that this peptide derived from E.coli-expressed Escherichia coli (strain K12) nfsA.



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Description

Amino acids 1-240 constitute the expression domain of recombinant Escherichia coli (strain K12) nfsA. The calculated molecular weight for this nfsA protein is 42.8 kDa. This nfsA protein is produced using e.coli expression system. The N-terminal 6xHis-SUMO tag was smoothly integrated into the coding gene of nfsA, which enables a simple process of detecting and purifying the nfsA recombinant protein in the following steps.

Escherichia coli oxygen-insensitive NADPH nitroreductase, encoded by the nfsA gene, is an enzyme that belongs to the nitroreductase family. This enzyme is involved in the reduction of nitroaromatic compounds using NADPH as a cofactor. The NfsA enzyme plays a role in the detoxification of nitroaromatic compounds by catalyzing the reduction of nitro groups to amino groups. This process is essential for bacterial resistance to nitro-containing antibiotics and for the metabolism of certain environmental pollutants. Understanding the structure and function of NfsA contributes to the knowledge of bacterial adaptation to diverse environments.

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.