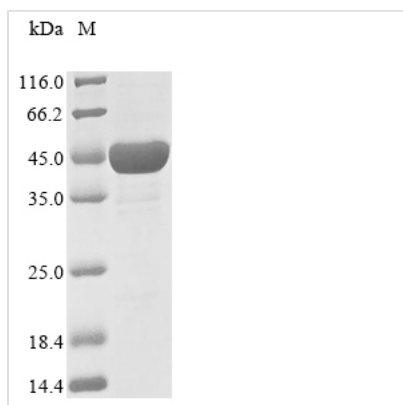




Recombinant Escherichia coli 1-deoxy-D-xylulose 5-phosphate reductoisomerase (dxr)

Product Code	CSB-EP332636ENV
Abbreviation	Recombinant E.coli dxr 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.	P45568
Storage Buffer	Tris-based buffer,50% glycerol
Product Type	Recombinant Proteins
Immunogen Species	Escherichia coli (strain K12)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	MKQLTILGSTGSIGCSTLDVVRHNPEHFRVVALVAGKNVTRMVEQCLEFSPRY AVMDDEASAKLLKTM LQQQGS RTEVL SGGQAACDMALEDVDQVMAAIVGA AGLLPTLAAIRAGKTILLANKESLVTCGR LFMDAVKQSKAQLLPVDSEHNAIFQS LPQPIQHNLGYADLEQNGVVSILLTGSGGPFRETPLRDLATMTPDQACRHPN WSMGRKISVDSATMMNKGLEYIEARWLFNASASQMEVLIHPQSVIHSMVRYQ DGSVLAQLGEPDMRTPIAHTMAWPNNRVNSGVKPLDFCKLSALTFAAPDYDRY PCLKLAMEAFEQGGQAATTALNAANEITVAAFLAQQIRFTDIAALNLSVLEKMDM REPQCVDDVLSVDANAREVARKEVMRLAS
Research Area	Cardiovascular
Source	E.coli
Target Names	dxr
Protein Names	Recommended name: 1-deoxy-D-xylulose 5-phosphate reductoisomerase Short name= DXP reductoisomerase EC= 1.1.1.267 Alternative name(s): 1-deoxyxylulose-5-phosphate reductoisomerase 2-C-methyl-D-erythritol 4-phosphate synthase
Expression Region	1-398aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 10xHis-tagged and C-terminal Myc-tagged
Mol. Weight	48.4 kDa
Protein Length	Full Length
Image	



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

Description

This recombinant E.coli K12 dxr protein is an E.coli-expressed Full Length protein. At the theoretical level, the steps needed for obtaining a recombinant protein are pretty straightforward. Obtain the dxr gene, clone it in an expression vector, transform it into the host of choice, induce it, and then, the protein is ready for purification and characterization. In practice, however, dozens of things can go wrong. Poor growth of the host, inclusion body formation, protein inactivity, and even not obtaining any protein at all are some of the problems often found down the pipeline. So we choose the most suitable strain and vector for this recombinant dxr protein expression and adopt the most optimized expression condition and purification method. Finally, mild condition and subsequent cumbersome protein-refolding procedures ensure this dxr protein is soluble.

dxr (also known as ispC or yaeM) is a protein encoding gene that provides an instruction in making a protein named 1-deoxy-D-xylulose 5-phosphate reductoisomerase (short name is DXP reductoisomerase) in Escherichia coli. The protein encoded by this gene belongs to DXR family and has a role as an Escherichia coli metabolite. This enzyme converts 1-deoxy-D-xylulose 5-phosphate (DXP) into the branched compound 2-C-methyl-D-erythritol 4-phosphate (MEP). It has been shown to be the molecular target for fosmidomycin, a promising antimalarial drug.

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.