

Dxr/DXP reductoisomerase Protein, E.coli (Myc, His)

Cat. No.:	HY-P71457
Synonyms:	dxr; ispC; yaeM; b0173; JW01681-deoxy-D-xylulose 5-phosphate reductoisomerase; DXP reductoisomerase; EC 1.1.1.267; 1-deoxyxylulose-5-phosphate reductoisomerase; 2-C-methyl-D-erythritol 4-phosphate synthase
Species:	E.coli
Source:	E. coli
Accession:	P45568 (1M-398S)
Gene ID:	66671539
Molecular Weight:	Approximately 48.4 kDa

PROPERTIES

AA Sequence	<pre> MKQLTILGST GSIGCSTLDV VRHNPEHFRV VALVAGKNVT RMVEQCLEFS PRYAVMDDEA SAKLLKTMLQ QQGSRTEVLS GQQAACDMAA LEDVDQVMAA IVGAAGLLPT LAAIRAGKTI LLANKESLVT CGRLFMDAVK QSKAQLLPVD SEHNAIFQSL PQPIQHNLGY ADLEQNGVVS ILLTGSGGPF RETPLRDLAT MTPDQACRHP NWSMGRKISV DSATMMNKGL EYIEARWLFN ASASQMEVLI HPQSVIHSMV RYQDGSVLAQ LGEPDMRTP I AHTMAWPNRV NSGVKPLDFC KLSALTF AAP DYDRYPCLKL AMEAFEQQA ATTALNAANE ITVAAF LAQQ IRFTDIAALN LSVLEKMDMR EPQCVDDVLS V DANAREVAR KEVMRLAS </pre>
Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Lyophilized powder.
Formulation	Lyophilized after extensive dialysis against solution in 20 mM Tris-HCl, 0.5 M NaCl, 6% Trehalose, pH 8.0.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH ₂ O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background

Dxr/DXP reductoisomerase is a protein that plays a crucial role in the biosynthesis of isoprenoids. It catalyzes the NADPH-dependent rearrangement and reduction of 1-deoxy-D-xylulose-5-phosphate (DXP), a key intermediate in the non-mevalonate pathway, to yield 2-C-methyl-D-erythritol 4-phosphate (MEP). This enzymatic conversion represents a pivotal step in the formation of isoprenoid precursors, essential compounds involved in various cellular processes, including the synthesis of essential metabolites and signaling molecules. The activity of Dxr/DXP reductoisomerase underscores its significance in the regulation of isoprenoid biosynthesis and cellular function.

Caution: Product has not been fully validated for medical applications. For research use only.

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