

DCL Protein, Bacillus subtilis, Recombinant (His)

General Information

Synonyms:	D-alanine--poly(phosphoribitol) ligase subunit 1;D-alanine-activating enzyme (DAE);DCL; dltA;D-alanine--D-alanyl carrier protein ligase;dae
Protein Construction:	1-503 aa
Species:	Bacillus subtilis
Expression Host:	E. coli
Accession:	P39581
Molecular Weight:	59.8 kDa (predicted)
AA Sequence:	MKLLHAIQTHAETYPQTDAFRSQGQSLTYQELWEQSDRAAAAIQKRISGEKKSPILVYGHMEPHMIVSFLGSV KAGHPYIPVDLSIPSERIAKIIESSGAELLIHAAGLSIDAVGQQIQTVSAEELLENEGGSVSQDQWVKEHETFYIY TSGSTGNPKGQVQISAANLQSFTDWICADFPVSGGKIFLNQAPFSFDLSVMDLYPCLQSGGTLHCVTKDAV NK PKVLFEEELKKSGLNVWTSTPSFVQMCLMDPGFSQDLLPHADTFMFCGEVLPVSVAKALLERFPKAKIFNTYGP TEATVAVTSVEITNDVISRSESLPVGFAPKPMNIFIMDEEGQPLPEGEKGEIIVAGPSVSRGYLGEPELTERKAFFS HEGQWAYRTGDAGFIQDGGQIFCQGRLDQIKLHGVRMELEEIEFHVRQSQYVRSVAVVIPYQPNGTVEYLIAAIV PEEHEFEKEFQLTSAIKKELAASLPAYMIPRKFYQDHIQMTANGKIDRKRIGEEVLV

QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 85% as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Tris-based buffer, 50% glycerol

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

A DRUG SCREENING EXPERT

Catalyzes the first step in the D-alanylation of lipoteichoic acid (LTA), the activation of D-alanine and its transfer onto the D-alanyl carrier protein (Dcp) DltC. In an ATP-dependent two-step reaction, forms a high energy D-alanyl-AMP intermediate, followed by transfer of the D-alanyl residue as a thiol ester to the phosphopantheinyl prosthetic group of the Dcp. D-alanylation of LTA plays an important role in modulating the properties of the cell wall in Gram-positive bacteria, influencing the net charge of the cell wall.

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