

panD Protein, *Corynebacterium jeikeium*

Cat. No.:	HY-P701949
Synonyms:	panD; Aspartate 1-decarboxylase; Aspartate alpha-decarboxylase
Species:	Others
Source:	E. coli
Accession:	Q4JXL3 (M1-A138)
Gene ID:	3432856
Molecular Weight:	

PROPERTIES

Appearance	Solution.
Formulation	Supplied as a 0.22 µm filtered solution of 50 mM Tris-HCl, pH7.5, 200 mM NaCl, 20% glycerol.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	Please use rapid thawing with running water to thaw the protein.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background	The panD protein plays a crucial role in bacterial metabolism as it catalyzes the pyruvoyl-dependent decarboxylation of aspartate, resulting in the production of beta-alanine. This enzymatic activity is a key step in the biosynthesis of pantothenate, an essential precursor for coenzyme A (CoA) biosynthesis. CoA is involved in various fundamental cellular processes, serving as a cofactor for enzymes participating in fatty acid metabolism, the tricarboxylic acid (TCA) cycle, and other pathways. The pyruvoyl-dependent decarboxylation reaction catalyzed by panD represents a critical point in the regulation of pantothenate biosynthesis and, consequently, the cellular capacity for CoA production. Understanding the functions of panD provides insights into the intricate network of metabolic pathways in bacteria and highlights its potential as a target for antimicrobial interventions.
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Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA