

Isopentenyl-diphosphate delta-isomerase 1

Cat. No. CBCRY10 Lot. No. (See product label)

SPECIFICATION

Product Overview

Source	E.coli
Background	IDI1 encodes a peroxisomally-localized enzyme that catalyzes the interconversion of isopentenyl diphosphate (IPP) to its highly electrophilic isomer, dimethylallyl diphosphate (DMAPP), which are the substrates for the successive reaction that results in the synthesis of farnesyl diphosphate and, ultimately, cholesterol. It has been shown in peroxisomal deficiency diseases such as Zellweger syndrome and neonatal adrenoleukodystrophy that there is reduction in IPP isomerase activity.
Protein Classification	Isomerase
Structure Weight	56107.39 Da
Polymer	1
Molecule	Isopentenyl-diphosphate delta-isomerase 1
Chain Length	255 amino acids
PDB ID	2I6K
MMDB ID	46256

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

Method	X-Ray Diffraction
Resolution	2.00?
Ligand Chemical Component	Acetic acid; Aminoethanolpyrophosphate; Magnesium ion; Manganese ion
Reference	Zhang, C., Liu, L., Xu, H., Wei, Z., Wang, Y., Lin, Y., Gong, W.(2007) Crystal structures of human IPP isomerase: new insights into the catalytic mechanism J.Mol.Biol.366: 1437-1446

GENE INFORMATION

Gene Name	IDI1
Synonyms	IPP1; IPPI1; EC 5.5.5.2; IPP isomerase; IPP isomerase; OTTHUMP00000018951; isopentenyl diphosphate dimethylallyl diphosphate isomerase 1; isopentenyl pyrophosphate isomerase 1; isopentenyl-diphosphate delta isomerase
UniProt ID	Q13907
Gene ID	3422
Chromosome Location	10p15.3
Function	magnesium ion binding; isopentenyl-diphosphate delta-isomerase activity; hydrolase activity; isomerase activity; metal ion binding

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