Creative Enzymes®

phosphoglycerate mutase (2,3-diphosphoglycerate-dependent)

Cat. No. EXWM-5522

Lot. No. (See product label)

Introduction

Description

The enzymes from vertebrates, platyhelminths, mollusks, annelids, crustaceans, insects, algae, fungi, yeast and some bacteria (particularly Gram-negative) require 2,3-bisphospho-D-glycerate as a cofactor. The enzyme is activated by 2,3-bisphospho-D-glycerate by transferring a phosphate to histidine (His10 in man and Escherichia coli, His8 in Saccharomyces cerevisiae). This phosphate can be transferred to the free OH of 2-phospho-D-glycerate, followed by transfer of the phosphate already on the phosphoglycerate back to the histidine. cf. EC 5.4.2.12 phosphoglycerate mutase. The enzyme has no requirement for metal ions. This enzyme also catalyse, slowly, the reactions of EC 5.4.2.4 bisphosphoglycerate mutase.

Synonyms

glycerate phosphomutase (diphosphoglycerate cofactor); 2,3-diphosphoglycerate dependent phosphoglycerate mutase; cofactor dependent phosphoglycerate mutase; phosphoglycerate phosphomutase (ambiguous); phosphoglyceromutase (ambiguous); monophosphoglycerate mutase (ambiguous); monophosphoglyceromutase (ambiguous); GriP mutase (ambiguous); PGA mutase (ambiguous); MPGM; PGAM; PGAM-d; PGM; dPGM

Product Information

Form

Liquid or lyophilized powder

EC Number

EC 5.4.2.11

Reaction

2-phospho-D-glycerate = 3-phospho-D-glycerate (overall reaction); (1a) [enzyme]-L-histidine + 2,3-bisphospho-D-glycerate = [enzyme]-Nτ-phospho-L-histidine + 2/3-phospho-D-glycerate; (1b) [enzyme]-Nτ-phospho-L-histidine + 2-phospho-D-glycerate = [enzyme]-L-histidine + 2,3-bisphospho-D-glycerate; (1c) [enzyme]-L-histidine + 2,3-bisphospho-D-glycerate = [enzyme]-Nτ-phospho-L-histidine + 3-phospho-D-glycerate; (1d) [enzyme]-Nτ-phospho-L-histidine + 2/3-bisphospho-D-glycerate = [enzyme]-L-histidine + 2,3-bisphospho-D-glycerate

Notes

This item requires custom production and lead time is between 5-9 weeks. We can custom produce according to your specifications.

Storage and Shipping Information

Storage

Store it at +4 ℃ for short term. For long term storage, store it at -20 ℃~-80 ℃.