Creative Enzymes®

GMP synthase (glutamine-hydrolysing)

Cat. No. EXWM-5805

Lot. No. (See product label)

Introduction

Description	Involved in the de novo biosynthesis of guanosine nucleotides. An N-terminal glutaminase domain binds L-glutamine and generates ammonia, which is transferred by a substrate-protective tunnel to the ATP-pyrophosphatase domain. The enzyme can catalyse the second reaction alone in the presence of ammonia.
Synonyms	GMP synthetase (glutamine-hydrolysing); guanylate synthetase (glutamine-hydrolyzing); guanosine monophosphate synthetase (glutamine-hydrolyzing); xanthosine 5'-phosphate amidotransferase; guanosine 5'-monophosphate synthetase

Product Information

Form	Liquid or lyophilized powder
EC Number	EC 6.3.5.2
CAS No.	37318-71-1
Reaction	ATP + XMP + L-glutamine + H2O = AMP + diphosphate + GMP + L-glutamate (overall reaction); (1a) L-glutamine + H2O = L-glutamate + NH3; (1b) ATP + XMP + NH3 = AMP + diphosphate + GMP
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 ℃.