Creative Enzymes®

asparagine synthase (glutamine-hydrolysing)

Cat. No. EXWM-5807

Lot. No. (See product label)

Introduction

Description	The enzyme from Escherichia coli has two active sites that are connected by an intramolecular ammonia tunnel. The enzyme catalyses three distinct chemical reactions: glutamine hydrolysis to yield ammonia takes place in the N-terminal domain. The C-terminal active site mediates both the synthesis of a β-aspartyl-AMP intermediate and its subsequent reaction with ammonia. The ammonia released is channeled to the other active site to yield asparagine.
Synonyms	asparagine synthetase (glutamine-hydrolysing); glutamine-dependent asparagine synthetase; asparagine synthetase B; AS; AS-B

Product Information

Form	Liquid or lyophilized powder
EC Number	EC 6.3.5.4
CAS No.	37318-72-2
Reaction	ATP + L-aspartate + L-glutamine + H2O = AMP + diphosphate + L-asparagine + L-glutamate (overall reaction); (1a) L-glutamine + H2O = L-glutamate + NH3; (1b) ATP + L-aspartate + NH3 = AMP + diphosphate + L-asparagine
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 ℃.