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 ℃.