Creative Enzymes®

aspartate-tRNAAsn ligase

Cat. No. EXWM-5655

Lot. No. (See product label)

Introduction

Description	When this enzyme acts on tRNAAsp, it catalyses the same reaction as EC 6.1.1.12, aspartate-tRNA ligase. It has, however, diminished discrimination, so that it can also form aspartyl-tRNAAsn. This relaxation of specificity has been found to result from the absence of a loop in the tRNA that specifically recognizes the third position of the anticodon. This accounts for the ability of this enzyme in, for example, Thermus thermophilus, to recognize both tRNAAsp (GUC anticodon) and tRNAAsn (GUU anticodon). The aspartyl-tRNAAsn is not used in protein synthesis until it is converted by EC 6.3.5.6, asparaginyl-tRNA synthase (glutamine-hydrolysing), into asparaginyl-tRNAAsn.
Synonyms	nondiscriminating aspartyl-tRNA synthetase

Product Information

Form	Liquid or lyophilized powder
EC Number	EC 6.1.1.23
CAS No.	9027-32-1
Reaction	ATP + L-aspartate + tRNAAsx = AMP + diphosphate + L-aspartyl-tRNAAsx
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 ℃.