

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 $\text{ATP} + \text{L-aspartate} + \text{tRNAAsx} = \text{AMP} + \text{diphosphate} + \text{L-aspartyl-tRNAAsx}$

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 °C for short term. For long term storage, store it at -20 °C~-80 °C.