

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