

## tRNAHis guanylyltransferase

Cat. No. EXWM-3291

Lot. No. (See product label)

### Introduction

#### Description

In eukarya an additional guanosine residue is added post-transcriptionally to the 5'-end of tRNAHis molecules. The addition occurs opposite a universally conserved adenosine73 and is thus the result of a non-templated 3'-5' addition reaction. The additional guanosine residue is an important determinant for aminoacylation by EC 6.1.1.21, histidyl-tRNA ligase. The enzyme requires a divalent cation for activity. ATP activation is not required when the substrate contains a 5'-triphosphate (ppp-tRNAHis).

#### Synonyms

histidine tRNA guanylyltransferase; Thg1p (ambiguous); Thg1 (ambiguous)

### Product Information

#### Form

Liquid or lyophilized powder

#### EC Number

EC 2.7.7.79

#### Reaction

$p\text{-tRNAHis} + \text{ATP} + \text{GTP} = \text{pppGp-tRNAHis} + \text{AMP} + \text{diphosphate}$  (overall reaction);  
(1a)  $p\text{-tRNAHis} + \text{ATP} = \text{App-tRNAHis} + \text{diphosphate}$ ; (1b)  $\text{App-tRNAHis} + \text{GTP} = \text{pppGp-tRNAHis} + \text{AMP}$

#### 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.