

O-phospho-L-serine-tRNA ligase

Cat. No. EXWM-5658

Lot. No. (See product label)

Introduction

Description

In organisms like *Archaeoglobus fulgidus* lacking EC 6.1.1.16 (cysteine-tRNA ligase) for the direct Cys-tRNA^{Cys} formation, Cys-tRNA^{Cys} is produced by an indirect pathway, in which EC 6.1.1.27 (O-phosphoseryl-tRNA ligase) ligates O-phosphoserine to tRNA^{Cys}, and EC 2.5.1.73 (O-phospho-L-seryl-tRNA: Cys-tRNA synthase) converts the produced O-phospho-L-seryl-tRNA^{Cys} to Cys-tRNA^{Cys}. The SepRS/SepCysS pathway is the sole route for cysteine biosynthesis in the organism. *Methanosarcina mazei* can use both pathways, the direct route using EC 6.1.1.16 (cysteine-tRNA ligase) and the indirect pathway with EC 6.1.1.27 and EC 2.5.1.73 (O-phospho-L-seryl-tRNA: Cys-tRNA synthase).

Synonyms

O-phosphoseryl-tRNA ligase; non-canonical O-phosphoseryl-tRNA synthetase; SepRS

Product Information

Form

Liquid or lyophilized powder

EC Number

EC 6.1.1.27

Reaction

ATP + O-phospho-L-serine + tRNA^{Cys} = AMP + diphosphate + O-phospho-L-seryl-tRNA^{Cys}

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.