Creative Enzymes®

glutaminyl-tRNA synthase (glutamine-hydrolysing)

Cat. No. EXWM-5810

Lot. No. (See product label)

Introduction

Description In systems lacking discernible glutamine-tRNA ligase (EC 6.1.1.18), glutaminyl-tRNAGln is formed by a two-enzyme system. In the first step, a nondiscriminating ligase (EC 6.1.1.24, glutamate-tRNAGln ligase) mischarges tRNAGln with glutamate, forming glutamyl-tRNAGln. The glutamyl-tRNAGln is not used in protein synthesis until the present enzyme converts it into glutaminyl-tRNAGln (glutamyl-tRNAGlu is not a substrate for this reaction). Ammonia or asparagine can substitute for the preferred substrate glutamine.

Synonyms Glu-AdT; Glu-tRNAGln amidotransferase; glutamyl-tRNAGln amidotransferase; Glu-tRNAGln:L-glutamine amido-ligase (ADP-forming)

Product Information

Form Liquid or lyophilized powder

EC Number EC 6.3.5.7

CAS No. 52232-48-1

Reaction ATP + L-glutamyl-tRNAGln + L-glutamine = ADP + phosphate + L-glutaminyl-tRNAGln + L-glutamate

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 ℃.