

Native *Bacillus* sp. Glutamine synthetase

Cat. No. DIA-155

Lot. No. (See product label)

Introduction

Description

Glutamine synthetase (GS) (EC 6.3.1.2) is an enzyme that plays an essential role in the metabolism of nitrogen by catalyzing the condensation of glutamate and ammonia to form glutamine: $\text{Glutamate} + \text{ATP} + \text{NH}_3 \rightarrow \text{Glutamine} + \text{ADP} + \text{phosphate}$. Glutamine Synthetase uses ammonia produced by nitrate reduction, amino acid degradation, and photorespiration. The amide group of glutamate is a nitrogen source for the synthesis of glutamine pathway metabolites.

Applications

Useful for the determination of ammonia and ATP in clinical analysis

Synonyms

Glutamine synthetase; GS; EC 6.3.1.2; Glutamate-ammonia ligase

Product Information

Source

Bacillus sp.

Appearance

White to pale brown powder

Form

Freeze dried powder

EC Number

EC 6.3.1.2

CAS No.

9023-70-5

Activity

> 15 U/mg

Contaminants

NADH oxidase < 0.05%

pH Stability

5.0-9.5 (37°C, 60 mins)

Optimum pH

8.0-9.0

Thermal stability

Stable at 60°C and below (pH 8.0, 10 mins)

Storage and Shipping Information

Storage

Store in tightly closed containers, desiccated, protected from light, at -20°C.