

## 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: Glutamate + ATP + NH<sub>3</sub> → Glutamine + ADP + 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.