

## L-Glutamate Decarboxylase (Crude Enzyme)

Cat. No. NATE-1846

Lot. No. (See product label)

### Introduction

#### Description

Glutamate decarboxylase or glutamic acid decarboxylase (GAD) is an enzyme that catalyzes the decarboxylation of glutamate to GABA and CO<sub>2</sub>. In mammals, GAD exists in two isoforms encoded by two different genes - GAD1 and GAD2. These isoforms are GAD67 and GAD65 with molecular weights of 67 and 65 kDa, respectively. GAD1 and GAD2 are expressed in the brain where GABA is used as a neurotransmitter, GAD2 is also expressed in the pancreas. At least two more forms, GAD25 and GAD44 (embryonic; EGAD) are described in the developing brain. They are coded by the alternative transcripts of GAD1, I-80 and I-86: GAD25 is coded by both, GAD44 - only by I-80. This product with the indicated enzyme activity was briefly purified from engineered E. coli.

#### Applications

medicine; synthesis; diagnostics; food industry

#### Synonyms

L-glutamic acid decarboxylase; L-glutamic decarboxylase; cysteic acid decarboxylase; L-glutamate  $\alpha$ -decarboxylase; aspartate 1-decarboxylase; aspartic  $\alpha$ -decarboxylase; L-aspartate- $\alpha$ -decarboxylase;  $\gamma$ -glutamate decarboxylase; L-glutamate 1-carboxy-lyase

### Product Information

#### Source

E. coli

#### Appearance

Clear to translucent yellow solution

#### EC Number

EC 4.1.1.15

#### CAS No.

9024-58-2

#### Activity

Undetermined

#### Reaction

L-glutamate = 4-aminobutanoate + CO<sub>2</sub>

#### Notes

Since this product needs to be freshly prepared, it will take about 2 weeks after you confirm the order. Each time of the freeze-thawing may cause partial inactivation. Therefore, it should be dispensed as required and stored at -20 °C or lower. With the preservation of the extension of time, the enzyme activity will decline to a certain extent, so the product should be used as soon as possible. This product may have turbidity or precipitation in the production and preservation process, it can be mixed after melting and will not affect the normal use. This product is limited to scientific research use, shall not be used for clinical diagnosis or treatment, shall not be used for food or medicine, shall not be stored in ordinary residential. For your safety and health, please wear an experimental suit and wear disposable gloves.

### Usage and Packaging

#### Package

100ml

### Storage and Shipping Information

#### Storage

at -20 °C or lower, for at least 1 month

