

## Lysine 6-dehydrogenase

Cat. No. EXWM-1451

Lot. No. (See product label)

### Introduction

#### Description

The enzyme is highly specific for L-lysine as substrate, although S-(2-aminoethyl)-L-cysteine can act as a substrate, but more slowly. While the enzyme from *Agrobacterium tumefaciens* can use only NAD<sup>+</sup>, that from the thermophilic bacterium *Geobacillus stearothermophilus* can also use NADP<sup>+</sup>, but more slowly.

#### Synonyms

L-lysine  $\epsilon$ -dehydrogenase; L-lysine 6-dehydrogenase; LysDH

### Product Information

#### Form

Liquid or lyophilized powder

#### EC Number

EC 1.4.1.18

#### CAS No.

89400-30-6

#### Reaction

L-lysine + NAD<sup>+</sup> = (S)-2,3,4,5-tetrahydropyridine-2-carboxylate + NADH + H<sup>+</sup> + NH<sub>3</sub> (overall reaction); (1a) L-lysine + NAD<sup>+</sup> + H<sub>2</sub>O = (S)-2-amino-6-oxohexanoate + NADH + H<sup>+</sup> + NH<sub>3</sub>; (1b) (S)-2-amino-6-oxohexanoate = (S)-2,3,4,5-tetrahydropyridine-2-carboxylate + H<sub>2</sub>O (spontaneous)

#### 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.