Creative Enzymes®

L-serine ammonia-lyase

Cat. No. EXWM-5277

Lot. No. (See product label)

Introduction

Description Most enzymes that catalyse this reaction are pyridoxal-phosphate-dependent, although some enzymes contain an iron-sulfur cluster instead. The reaction catalysed by both types of enzymes involves the initial elimination of water to form an enamine intermediate (hence the enzyme's original classification as EC 4.2.1.13, L-serine dehydratase), followed by tautomerization to an imine form and hydrolysis of the C-N bond. The latter reaction, which can occur spontaneously, is also be catalysed by EC 3.5.99.10, 2-iminobutanoate/2-iminopropanoate deaminase. This reaction is also carried out by EC 4.3.1.19, threonine ammonia-lyase, from a number of sources.

Synonyms serine deaminase; L-hydroxyaminoacid dehydratase; L-serine deaminase; L-serine dehydratase; L-serine hydro-lyase (deaminating)

Product Information

Form Liquid or lyophilized powder

EC Number EC 4.3.1.17

CAS No. 9014-27-1

Reaction L-serine = pyruvate + NH3 (overall reaction); (1a) L-serine = 2-aminoprop-2-enoate + H2O; (1b) 2-aminoprop-2-enoate = 2-iminopropanoate (spontaneous); (1c) 2-iminopropanoate + H2O = pyruvate + NH3 (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 ℃ for short term. For long term storage, store it at -20 ℃~-80 ℃.