Creative Enzymes®

D-serine ammonia-lyase

Cat. No. EXWM-5278

Lot. No. (See product label)

Introduction

Description	A pyridoxal-phosphate protein. The enzyme cleaves a carbon-oxygen bond, releasing a water molecule (hence the enzyme's original classification as EC 4.2.1.14, D-serine dehydratase) and an unstable enamine product that tautomerizes to an imine form, which undergoes a hydrolytic deamination to form pyruvate and ammonia. The latter reaction, which can occur spontaneously, can also be catalysed by EC 3.5.99.10, 2-iminobutanoate/2-iminopropanoate deaminase. Also acts, slowly, on D-threonine.
Synonyms	D-hydroxyaminoacid dehydratase; D-serine dehydrase; D-hydroxy amino acid dehydratase; D-serine hydrolase; D-serine dehydratase (deaminating); D-serine deaminase; D-serine hydro-lyase (deaminating)

Product Information

Form	Liquid or lyophilized powder
EC Number	EC 4.3.1.18
CAS No.	9015-88-7
Reaction	D-serine = pyruvate + NH3 (overall reaction); (1a) D-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 ℃.