

## 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 + NH<sub>3</sub> (overall reaction); (1a) D-serine = 2-aminoprop-2-enoate + H<sub>2</sub>O; (1b) 2-aminoprop-2-enoate = 2-iminopropanoate (spontaneous); (1c) 2-iminopropanoate + H<sub>2</sub>O = pyruvate + NH<sub>3</sub> (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.