

## cystathionine $\gamma$ -lyase

Cat. No. EXWM-5312

Lot. No. (See product label)

### Introduction

**Description** A multifunctional pyridoxal-phosphate protein. The enzyme cleaves a carbon-sulfur bond, releasing L-cysteine and an unstable enamine product that tautomerizes to an imine form, which undergoes a hydrolytic deamination to form 2-oxobutanoate 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 catalyses the conversion of L-homoserine to 2-oxobutanoate and ammonia, of L-cystine to thiocysteine, pyruvate and ammonia, and of L-cysteine to pyruvate, hydrogen sulfide and ammonia.

**Synonyms** homoserine deaminase; homoserine dehydratase; cystine desulphydrase; cysteine desulphydrase;  $\gamma$ -cystathionase; cystathionase; homoserine deaminase-cystathionase;  $\gamma$ -CTL; cystalysin; cysteine lyase; L-cystathionine cysteine-lyase (deaminating); CGL

### Product Information

**Form** Liquid or lyophilized powder

**EC Number** EC 4.4.1.1

**CAS No.** 9012-96-8

**Reaction** L-cystathionine + H<sub>2</sub>O = L-cysteine + 2-oxobutanoate + NH<sub>3</sub> (overall reaction); (1a) L-cystathionine = L-cysteine + 2-aminobut-2-enoate; (1b) 2-aminobut-2-enoate = 2-iminobutanoate (spontaneous); (1c) 2-iminobutanoate + H<sub>2</sub>O = 2-oxobutanoate + 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.