Creative Enzymes®

L-cysteine desulfidase

Cat. No. EXWM-5330

Lot. No. (See product label)

Introduction

Description	The enzyme from the archaeon Methanocaldococcus jannaschii contains a [4Fe-4S] cluster and is specific for L-cysteine (cf. EC 4.4.1.1, cystathionine γ-lyase). It cleaves a carbon-sulfur bond releasing sulfide and the unstable enamine product 2-aminoprop-2-enoate that tautomerizes to an imine form, which undergoes a hydrolytic deamination to form pyruvate and ammonia. The same reaction can also be catalysed by some pyridoxal-phosphate proteins (cf. EC 4.4.1.1, cystathionine γ-lyase).
Synonyms	L-cysteine desulfhydrase

Product Information

Form	Liquid or lyophilized powder
EC Number	EC 4.4.1.28
Reaction	L-cysteine + H2O = sulfide + NH3 + pyruvate (overall reaction); (1a) L-cysteine = 2-aminoprop-2-enoate + sulfide; (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 ℃.