

D-Ala-D-Ala dipeptidase

Cat. No. EXWM-4036

Lot. No. (See product label)

Introduction

Description

A Zn²⁺-dependent enzyme. The enzyme protects *Enterococcus faecium* from the antibiotic vancomycin, which can bind to the -D-Ala-D-Ala sequence at the C-terminus of the peptidoglycan pentapeptide (see diagram). This enzyme reduces the availability of the free dipeptide D-Ala-D-Ala, which is the precursor for this pentapeptide sequence, allowing D-Ala-(R)-lactate (for which vancomycin has much less affinity) to be added to the cell wall instead. The enzyme is stereospecific, as L-Ala-L-Ala, D-Ala-L-Ala and L-Ala-D-Ala are not substrates. Belongs in peptidase family M15.

Synonyms

D-alanyl-D-alanine dipeptidase; vanX D-Ala-D-Ala dipeptidase; VanX

Product Information

Form

Liquid or lyophilized powder

EC Number

EC 3.4.13.22

Reaction

D-Ala-D-Ala + H₂O = 2 D-Ala

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.