Creative Enzymes®

N-acetylmuramoyl-L-alanyl-D-glutamyl-L-lysyl-(N6-triglycine)-D-alanyl-D-alanine-diphosphoundecaprenyl-N-acetylglucosamine:glycine glycyltransferase

Cat. No. EXWM-2291

Lot. No. (See product label)

Introduction

Description This Staphylococcus aureus enzyme catalyses the successive transfer of two Gly moieties from charged tRNAs to MurNAc-L-Ala-D-isoglutaminyl-L-Lys-(N6-tri-Gly)-D-Ala-D-Ala-diphosphoundecaprenyl-GlcNAc, attaching them to the three Gly molecules that were previously attached to the N6 of the L-Lys at position 3 of the pentapeptide by EC 2.3.2.16 (lipid II:glycine glycyltransferase) and EC 2.3.2.17 (N-acetylmuramoyl-L-alanyl-D-glutamyl-L-lysyl-(N6-glycyl)-D-alanyl-D-alanine-diphosphoundecaprenyl-N-acetylglucosamine:glycine glycyltransferase). This is the last step in the synthesis of the pentaglycine interpeptide bridge that is used in this organism for the crosslinking of different glycan strands to each other.

Synonyms femB (gene name); N-acetylmuramoyl-L-alanyl-D-glutamyl-L-lysyl-(N6-triglycine)-D-alanyl-D-alanine-ditrans,octacis-diphosphoundecaprenyl-N-acetylglucosamine:glycine glycyltransferase

Product Information

Form Liquid or lyophilized powder

EC Number EC 2.3.2.18

Reaction MurNAc-L-Ala-D-isoglutaminyl-L-Lys-(N6-tri-Gly)-D-Ala-D-Ala-diphospho-ditrans,octacis-undecaprenyl-GlcNAc + 2 glycyl-tRNAGly = MurNAc-L-Ala-D-isoglutaminyl-L-Lys-(N6-penta-Gly)-D-Ala-D-Ala-diphospho-ditrans,octacis-undecaprenyl-GlcNAc + 2 tRNAGly

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 ℃.