

## Lipid II:glycine glycytransferase

Cat. No. EXWM-2289

Lot. No. (See product label)

### Introduction

#### Description

The enzyme from *Staphylococcus aureus* catalyses the transfer of glycine from a charged tRNA to MurNAc-L-Ala-D-isoglutaminy-L-Lys-D-Ala-D-Ala-diphosphoundecaprenyl-GlcNAc (lipid II), attaching it to the N6 of the L-Lys at position 3 of the pentapeptide. This is the first step in the synthesis of the pentaglycine interpeptide bridge that is used in *S. aureus* for the crosslinking of different glycan strands to each other. Four additional Gly residues are subsequently attached by EC 2.3.2.17 (N-acetylmuramoyl-L-alanyl-D-glutamyl-L-lysyl-(N6-glycyl)-D-alanyl-D-alanine-diphosphoundecaprenyl-N-acetylglucosamine:glycine glycytransferase) and EC 2.3.2.18 (N-acetylmuramoyl-L-alanyl-D-glutamyl-L-lysyl-(N6-triglycine)-D-alanyl-D-alanine-diphosphoundecaprenyl-N-acetylglucosamine:glycine glycytransferase).

#### Synonyms

N-acetylmuramoyl-L-alanyl-D-glutamyl-L-lysyl-D-alanyl-D-alanine-diphosphoundecaprenyl-N-acetylglucosamine:N6-glycine transferase; femX (gene name); alanyl-D-alanine-diphospho-ditrans,octacis-undecaprenyl-N-acetylglucosamine:glycine N6-glycytransferase

### Product Information

#### Form

Liquid or lyophilized powder

#### EC Number

EC 2.3.2.16

#### Reaction

MurNAc-L-Ala-D-isoglutaminy-L-Lys-D-Ala-D-Ala-diphospho-ditrans,octacis-undecaprenyl-GlcNAc + glycyl-tRNAGly = MurNAc-L-Ala-D-isoglutaminy-L-Lys-(N6-Gly)-D-Ala-D-Ala-diphospho-ditrans,octacis-undecaprenyl-GlcNAc + 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 °C for short term. For long term storage, store it at -20 °C~-80 °C.