

Structure and Functional Aspects of the bacterial bifunctional transglycosylase PBP1b from E. coli and Binding Interactions with Moenomycin

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摘要

The invention relates to the crystal structure of the full-length bacterial bifunctional transglycosylase PBP1b from E. coli, in complex with its inhibitor Moenomycin. PBP1b from E. coli is a bifunctional enzyme containing both glycosyltransferase and transpeptidase activity (class A penicillin-binding protein). The sequence of PBP1b is composed of an N-terminal single-spanning transmembrane (TM) helix and a functionally-unknown insertion followed by the glycosyltransferase (TG) domain and the C-terminal transpeptidase (TP) domain. A three-dimensional structure of the membrane-bound enzyme transglycosylase was determined by X-ray crystallography.

技術優勢

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應用範圍

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創作人

Chi-Huey Wong, Che Ma



中央研究院
ACADEMIA SINICA