

Genetic Engineering of YJ003-OTBP2 strain of *S. venezuelae* for the production of TDP-4-amino-4, 6 dideoxy-glucose

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Deoxyaminosugars comprise an important class of deoxysugar moieties synthesized by a variety of organisms, including plants, fungi, and bacterial, which are usually formed via transamination reaction. Deoxyaminosugars are indispensable structural components of many biologically active natural products and are essential for many significant cellular processes. These features of deoxyaminosugars make studies of their synthesis important in efforts to produce antibiotics with new deoxysugar appendages by reengineering biosynthetic pathways either *in vivo* or *in vitro*. Here, pOTBP1 plasmid, based on the integrative plasmid pSET152 derivative containing an *ermE** promoter has been constructed and transformed in YJ003 strain of *S. venezuelae* by PEG mediated protoplast transformation method. Expression vector i.e. pOTBP2 containing 4-aminotransferase gene (*gerB*) from *S. sps Geri-155* has later transformed in new mutant YJ003-OTBP1 to get YJ003-OTBP2 for the production of TDP-4-amino-4, 6 dideoxy-glucose.