

Abstract

A genetically modified microorganism capable of directly producing a 16-hydroxylated macrolide compound; and a process for producing a 16-hydroxylated macrolide compound using the microorganism. Specifically, a genetically modified microorganisms having DNA encoding a polypeptide involved in the biosynthesis of a macrolide compound pladienolide and DNA encoding a polypeptide having a pladienolide 16-hydroxylase activity; and a process for producing a 16-hydroxylated macrolide compound comprising the steps of culturing the genetically modified microorganism in a culture medium and collecting a 16-hydroxylated macrolide compound from the culture medium.