Creative Enzymes®

acyl-homoserine-lactone acylase

Cat. No. EXWM-4489

Lot. No. (See product label)

Introduction

Description	Acyl-homoserine lactones (AHLs) are produced by a number of bacterial species and are used by them to regulate the expression of virulence genes in a process known as quorum-sensing. Each bacterial cell has a basal level of AHL and, once the population density reaches a critical level, it triggers AHL-signalling which, in turn, initiates the expression of particular virulence genes. Plants or animals capable of degrading AHLs would have a therapeutic advantage in avoiding bacterial infection as they could prevent AHL-signalling and the expression of virulence genes in quorum-sensing bacteria. This quorum-quenching enzyme removes the fatty-acid side chain from the homoserine lactone ring of AHL-dependent quorum-sensing signal molecules. It has broad specificity for AHLs with side changes ranging in length from 11 to 14 carbons. Substituents at the 3'-position, as found in N-(3-oxododecanoyl)-L-homoserine lactone, do not affect this activity.
Synonyms	acyl-homoserine lactone acylase; AHL-acylase; AiiD; N-acyl-homoserine lactone acylase; PA2385 protein; quorum-quenching AHL acylase; quorum-quenching enzyme; QuiP

Product Information

Form	Liquid or lyophilized powder
EC Number	EC 3.5.1.97
Reaction	an N-acyl-L-homoserine lactone + H2O = L-homoserine lactone + a carboxylate
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 ℃.