Creative Enzymes®

acetoacetate decarboxylase

Cat. No. EXWM-4784

Lot. No. (See product label)

Introduction

Description	Acetoacetate decarboxylase (AAD or ADC) is an enzyme involved in both the ketone body production pathway in humans and other mammals, and solventogenesis in bacteria. Acetoacetate decarboxylase plays a key role in solvent production by catalyzing the decarboxylation of acetoacetate, yielding acetone and carbon dioxide. This enzyme has been of particular interest because it is a classic example of how pKa values of ionizable groups in the enzyme active site can be significantly perturbed. Specifically, the pKa value of lysine 115 in the active site is unusually low, allowing for the formation of a Schiff base intermediate and catalysis.
Synonyms	acetoacetic acid decarboxylase; acetoacetate carboxy-lyase

Product Information

Form	Liquid or lyophilized powder
EC Number	EC 4.1.1.4
CAS No.	9025-03-0
Reaction	acetoacetate + H+ = acetone + CO2
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 ℃.