

caffeoyl-CoA reductase

Cat. No. EXWM-1280

Lot. No. (See product label)

Introduction

Description

The enzyme, characterized from the bacterium *Acetobacterium woodii*, contains two [4Fe-4S] clusters and FAD. The enzyme couples the endergonic ferredoxin reduction with NADH as reductant to the exergonic reduction of caffeoyl-CoA with the same reductant. It uses the mechanism of electron bifurcation to overcome the steep energy barrier in ferredoxin reduction. It also reduces 4-coumaroyl-CoA and feruloyl-CoA.

Synonyms

electron-bifurcating caffeoyl-CoA reductase; caffeoyl-CoA reductase-Etf complex; hydrocaffeoyl-CoA:NAD⁺, ferredoxin oxidoreductase

Product Information

Form

Liquid or lyophilized powder

EC Number

EC 1.3.1.108

Reaction

$3\text{-(3,4-dihydroxyphenyl)propanoyl-CoA} + 2\text{ NAD}^+ + 2\text{ reduced ferredoxin [iron-sulfur] cluster} = (2\text{E})\text{-3-(3,4-dihydroxyphenyl)prop-2-enoyl-CoA} + 2\text{ NADH} + 2\text{ oxidized ferredoxin [iron-sulfur] cluster}$

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 °C for short term. For long term storage, store it at -20 °C~-80 °C.