Creative Enzymes®

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-(3,4-dihydroxyphenyl)propanoyl-CoA + 2 NAD+ + 2 reduced ferredoxin [iron-sulfur] cluster = (2E)-3-(3,4-dihydroxyphenyl)prop-2-enoyl-CoA + 2 NADH + 2 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 ℃ for short term. For long term storage, store it at -20 ℃~-80 ℃.