Creative Enzymes®

9-cis-epoxycarotenoid dioxygenase

Cat. No. EXWM-0570

Lot. No. (See product label)

Introduction

Description	Requires iron(II). Acts on 9-cis-violaxanthin and 9'-cis-neoxanthin but not on the all-trans isomers. In vitro, it will cleave 9-cis-zeaxanthin. Catalyses the first step of abscisic-acid biosynthesis from carotenoids in chloroplasts, in response to water stress. The other enzymes involved in the abscisic-acid biosynthesis pathway are EC 1.1.1.288 (xanthoxin dehydrogenase), EC 1.2.3.14 (abscisic-aldehyde oxidase) and EC 1.14.13.93 [(+)-abscisic acid 8'-hydroxylase].
Synonyms	nine-cis-epoxycarotenoid dioxygenase; NCED; AtNCED3; PvNCED1; VP14

Product Information

Form	Liquid or lyophilized powder
EC Number	EC 1.13.11.51
CAS No.	199877-10-6
Reaction	(1) a 9-cis-epoxycarotenoid + O2 = 2-cis,4-trans-xanthoxin + a 12'-apo-carotenal; (2) 9-cis-violaxanthin + O2 = 2-cis,4-trans-xanthoxin + (3S,5R,6S)-5,6-epoxy-3-hydroxy-5,6-dihydro-12'-apo-β-caroten-12'-al; (3) 9'-cis-neoxanthin + O2 = 2-cis,4-trans-xanthoxin + (3S,5R,6R)-5,6-dihydroxy-6,7-didehydro-5,6-dihydro-12'-apo-β-caroten-12'-al
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 ℃.