Creative Enzymes®

nitric-oxide synthase (NADPH)

Cat. No. EXWM-0846

Lot. No. (See product label)

Introduction

Description	Binds FAD, FMN, heme (iron protoporphyrin IX) and tetrahydrobiopterin. This eukaryotic enzyme, which is found in plants and animals, consists of oxygenase and reductase domains that are linked via a regulatory calmodulin-binding domain. Upon calcium-induced calmodulin binding, the reductase and oxygenase domains form a complex, allowing electrons to flow from NADPH via FAD and FMN to the active center. May produce superoxide under certain conditions. cf. EC 1.14.13.165, nitric-oxide synthase [NAD(P)H dependent].
Synonyms	nitric oxide synthetase; endothelium-derived relaxation factor-forming enzyme; endothelium-derived relaxing factor synthase; NO synthase; NADPH-diaphorase

Product Information

Form	Liquid or lyophilized powder
EC Number	EC 1.14.13.39
CAS No.	125978-95-2
Reaction	2 L-arginine + 3 NADPH + 3 H+ + 4 O2 = 2 L-citrulline + 2 nitric oxide + 3 NADP+ + 4 H2O (overall reaction); (1a) 2 L-arginine + 2 NADPH + 2 H+ + 2 O2 = 2 Nω-hydroxy-L-arginine + 2 NADP+ + 2 H2O; (1b) 2 Nω-hydroxy-L-arginine + NADPH + H+ + 2 O2 = 2 L-citrulline + 2 nitric oxide + NADP+ + 2 H2O
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 ℃.