

## nitric-oxide synthase [NAD(P)H]

Cat. No. EXWM-0764

Lot. No. (See product label)

### Introduction

**Description** Binds heme (iron protoporphyrin IX) and tetrahydrobiopterin. Most of the bacterial and archaeal enzymes consist of only an oxidase domain and function together with bacterial ferredoxins. The enzyme from the  $\Delta$ -proteobacterium *Sorangium cellulosum* also includes a reductase domain that binds FAD, FMN and a [2Fe-2S] cluster. The similar enzymes from plants and animals use only NADPH as acceptor (cf. EC 1.14.13.39).

**Synonyms** nitric oxide synthetase; NO synthase

### Product Information

**Form** Liquid or lyophilized powder

**EC Number** EC 1.14.13.165

**Reaction**  $2 \text{ L-arginine} + 3 \text{ NAD(P)H} + 3 \text{ H}^+ + 4 \text{ O}_2 = 2 \text{ L-citrulline} + 2 \text{ nitric oxide} + 3 \text{ NAD(P)}^+ + 4 \text{ H}_2\text{O}$  (overall reaction); (1a)  $2 \text{ L-arginine} + 2 \text{ NAD(P)H} + 2 \text{ H}^+ + 2 \text{ O}_2 = 2 \text{ N}\omega\text{-hydroxy-L-arginine} + 2 \text{ NAD(P)}^+ + 2 \text{ H}_2\text{O}$ ; (1b)  $2 \text{ N}\omega\text{-hydroxy-L-arginine} + \text{NAD(P)H} + \text{H}^+ + 2 \text{ O}_2 = 2 \text{ L-citrulline} + 2 \text{ nitric oxide} + \text{NAD(P)}^+ + 2 \text{ H}_2\text{O}$

**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.