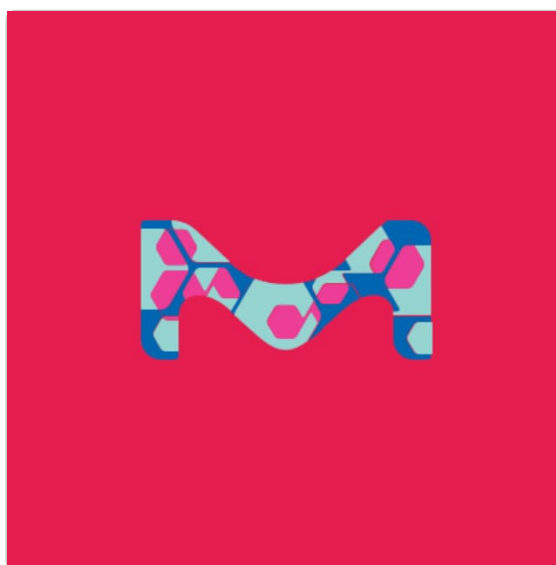


**F0628** ▶ **Sigma-Aldrich**.

## Ferredoxin-NADP<sup>+</sup> Reductase from *Spinacia oleracea* (spinach)

★★★★★ (0)

lyophilized powder, ≥15 units/mg solid, secondary activity: ≥10 units/mg solid NADPH diaphorase

[Toutes les photos \(1\)](#)**Synonyme(s):**Ferredoxin-NADP<sup>+</sup> oxidoreductase**Numéro CAS:****9029-33-8****Numéro de classification (Commission des enzymes):****1.18.1.2 (BRENDA, IUBMB)****Numéro MDL:****MFCD00131050****NACRES:**

NA.54

### Select an Option

Référence

F0628-1UN



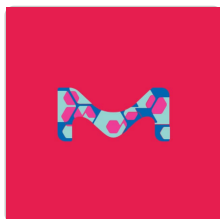
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lyophilized powder, Ferredoxin ≥15 wt. %

[Consulter le prix et la disponibilité](#)[<](#) 1 of 10 [>](#)**PROPRIÉTÉS****Forme**

Ferredoxin-NADP+ reductase

lyophilized powder

**Niveau de qualité**

200

**specific activity**

≥15 units/mg solid

**Activité étrangère**

NADH diaphorase activity ≤10 units/mg solid

**Temp. de stockage**

-20°C

## DESCRIPTION

### Description générale

Ferredoxin-NADP<sup>+</sup> Reductase is a ferredoxin-soluble partner with a molar ratio to PSI of 0.9 and 3.

### Application

Ferredoxin-NADP<sup>+</sup> Reductase from *Spinacia oleracea* (spinach) has been used to test the effect of potential protein partners on the activity of the glyceraldehyde-3-phosphate dehydrogenase (GAPDH)-CP12 preparation. It has also been used in standard assay conditions for phycocyanobilin:ferredoxin oxidoreductase (PcyA) enzyme assay.

Ferredoxin-NADP<sup>+</sup> Reductase was used in *in vitro* ferredoxin-dependent desaturation of fatty acids in cyanobacterial thylakoid membranes. It was also used to regulate glyceraldehyde-3-phosphate dehydrogenase.

### Actions biochimiques/physiologiques

Ferredoxin-NADP<sup>+</sup> reductase catalyzes the reversible conversion of reduced ferredoxin to oxidized ferredoxin during photosynthesis. Ferredoxin-NADP(H) reductase constitutes a family of hydrophilic FAD-containing monomeric enzymes that deliver NADPH or low potential one-electron donors to redox-based metabolisms in plastids, mitochondria, and bacteria.

Ferredoxin-NADP<sup>+</sup> reductase catalyzes the reversible conversion of reduced ferredoxin to oxidized ferredoxin during photosynthesis. Ferredoxin-NADP(H) reductase constitutes a family of hydrophilic FAD-containing monomeric enzymes that deliver NADPH or low potential one-electron donors to redox-based metabolisms in plastids, mitochondria, and bacteria.

### Définition de l'unité

One unit will reduce 1.0 millimole of cytochrome C per min at pH 7.5 at 25 °C in the presence of spinach ferredoxin and NADP.

## INFORMATIONS SUR LA SÉCURITÉ

### Code de la classe de stockage

13 - Non Combustible Solids

### WGK

WGK 3

### Flash Point(F)

Not applicable

### Point d'éclair C

Not applicable

### Équipement de protection individuelle

Eyeshields, Gloves, type N95 (US)

## DOCUMENTATION

### Certificat d'analyse

Saisir un numéro de lot pour rechercher un certificat d'analyse (COA).

Numéro de lot

e.g. 023J5431

### Comment saisir un numéro de lot (COA)

Rechercher

### Certificat d'origine

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Numéro de lot

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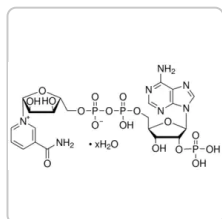
### Comment saisir un numéro de lot (COO)

## Rechercher

## Plus De Documents

[Enzyme Explorer](#)[FDS](#)

## LES CLIENTS ONT ÉGALEMENT CONSULTÉ



Sigma-Aldrich

N5755

 **$\beta$ -Nicotinamide adenine dinucleotide phosphate hydrate**[Consulter le prix et la disponibilité](#)

&lt; 1 of 7 &gt;

## ARTICLES REVUS PAR DES PAIRS

[Open questions in ferredoxin-NADP+ reductase catalytic mechanism.](#)

Néstor Carrillo et al.

*European journal of biochemistry*, 270(9), 1900-1915 (2003-04-24)

Ferredoxin (flavodoxin)-NADP(H) reductases (FNR) are ubiquitous flavoenzymes that deliver NADPH or low potential one-electron donors (ferredoxin, flavodoxin) to redox-based metabolisms in plastids, mitochondria and bacteria. The plant-type reductase is also the basic prototype for one of the major families of

**A Conserved Histidine-Aspartate Pair Is Required for Exovinyl Reduction of Biliverdin by a Cyanobacterial Phycocyanobilin:Ferredoxin Oxidoreductase**

Tu SL, et al.

*The Journal of Biological Chemistry*, 281(6), 3127-3136 (2006)[Glyceraldehyde-3-phosphate dehydrogenase is regulated by ferredoxin-NADP reductase in the diatom \*Asterionella formosa\*.](#)

Malika Mekhalfi et al.

*The New phytologist*, 203(2), 414-423 (2014-05-07)

Diatoms are a widespread and ecologically important group of heterokont algae that contribute c. 20% to global productivity. Previous work has shown that regulation of their key Calvin cycle enzymes differs from that of the Plantae, and that in crude

### Glyceraldehyde-3-phosphate dehydrogenase is regulated by ferredoxin-NADP reductase in the diatom *Asterionella formosa*

Mekhalfi M, et al.

*The New phytologist*, 203, 414-423 (2014)

### Ferredoxin-NADP+ Reductase KINETICS OF ELECTRON TRANSFER, TRANSIENT INTERMEDIATES, AND CATALYTIC ACTIVITIES STUDIED BY FLASH-ABSORPTION SPECTROSCOPY WITH ISOLATED PHOTOSYSTEM I AND FERREDOXIN

Cassan N, et al.

*The Journal of Biological Chemistry*, 280(28), 25960-25972 (2005)

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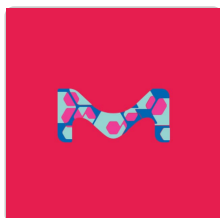
## PROTOCOLES ET ARTICLES SCIENTIFIQUES

### Protocoles

#### [Enzymatic Assay of Ferredoxin NADP Reductase \(EC 1.18.12\)](#)

Enzymatic Assay of Ferredoxin NADP Reductase - To standardize a procedure for the enzymatic assay of Ferredoxin NADP Reductase (EC.1.18.12).

## PRODUITS CONSULTÉS RÉCEMMENT



Sigma-Aldrich

**F0556**

**Fibronectin solution human fibroblasts**

cell culture derived, ~0.5 mg/mL, sterile-filtered, BioReagent, suitable for cell culture

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## Évaluations



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## Questions

Soyez le premier à poser une question

## SERVICE TECHNIQUE

Notre équipe de scientifiques dispose d'une expérience dans tous les secteurs de la recherche, notamment en sciences de la vie, science des matériaux, synthèse chimique, chromatographie, analyse et dans de nombreux autres domaines..

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