

Saisir le nom du produit, le numéro de lot, etc.



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FDS

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P8125 ► Sigma-Aldrich.

Peroxidase from horseradish

★★★★★ (0)

Type I, essentially salt-free, lyophilized powder, ≥50 units/mg solid (using pyrogallol)

Synonyme(s):

Donor:hydrogen-peroxide oxidoreductase, Horseradish peroxidase

Numéro CAS: 9003-99-0

Numéro EC: 232-668-6

eCl@ss: 32160410

Numéro de classification
(Commission des enzymes): 1.11.1.7 (BRENDA, IUBMB)

Numéro MDL: MFCD00071339

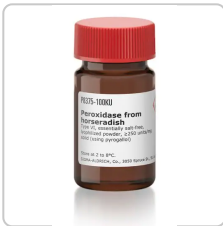
NACRES: NA.54

Référence	Conditionnement	Disponibilité		Prix	Quantité	
P8125-5KU	5000 UNITS	✓ Disponible pour expédition le 07 octobre 2022	Détails...	51,50 €	- +	
P8125-25KU	25000 UNITS	✓ Disponible pour expédition le 07 octobre 2022	Détails...	179,00 €	- +	
P8125-50KU	50000 UNITS	✓ Only 4 left in stock (more on the way)	Détails...	298,00 €	- +	
P8125-100KU	100000 UNITS	✓ Date d'expédition estimée le 17 novembre 2022		556,00 €	- +	
P8125-200KU	200000 UNITS	✓ Only 1 left in stock (more on the way)	Détails...	920,00 €	- +	

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PRODUITS RECOMMANDÉS



Sigma-Aldrich

P8375

Peroxidase from horseradish

Type VI, essentially salt-free, lyophilized powder, ≥ 250 units/mg solid (using pyrogallol)

[Consulter le prix et la disponibilité](#)



Sigma-Aldrich

P8250

Peroxidase from horseradish

Type II, essentially salt-free, lyophilized powder, 150-250 units/mg solid (using pyrogallol)

[Consulter le prix et la disponibilité](#)



PROPRIÉTÉS

Type	Type I
Niveau de qualité	200
Forme	essentially salt-free, lyophilized powder
specific activity	≥ 50 units/mg solid (using pyrogallol)
Poids mol.	~44 kDa

Solubilité	0.1 M phosphate buffer: soluble (pH 6.0) H ₂ O: soluble
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Rapport des absorbances	RZ ≥1.0
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Temp. de stockage	2-8°C
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Vous recherchez des produits similaires ? Visitez [Guide de comparaison des produits](#)

Catégories apparentées

Detection Substrates & Enzymes

DESCRIPTION

Description générale

Horseradish peroxidase is isolated from horseradish roots (*Amoracia rusticana*) and belongs to the ferroporphyrin group of peroxidases. HRP is a single chain polypeptide containing four disulfide bridges. It is a glycoprotein containing 18% carbohydrate. The carbohydrate composition consists of galactose, arabinose, xylose, fucose, mannose, mannosamine, and galactosamine depending upon the specific isozyme. Its molecular weight (~44 kDa) includes the polypeptide chain (33,890 Daltons), hemin plus Ca²⁺ (~700 Daltons), and carbohydrate (~9,400 Daltons). At least seven isozymes of HRP exist. The isoelectric point for horseradish peroxidase isozymes ranges from 3.0 - 9.0.

Application

Peroxidase from horseradish has been used:

- in fecal starch analysis

- to measure plasma glucose levels by Trinder method
- to incubate feruloylated arabinoxylan fractions and also to evaluate oxidative coupling
- in the detection of glycoproteins

Conditionnement

5000, 25000, 50000, 100000, 200000 units in glass bottle

Actions biochimiques/physiologiques

HRP readily combines with hydrogen peroxide (H_2O_2) and the resultant [HRP- H_2O_2] complex can oxidize a wide variety of hydrogen donors. The optimal pH is 6.0-6.5 and the enzyme is most stable in the pH range of 5.0-9.0. HRP can be conjugated to antibodies by several different methods including glutaraldehyde, periodate oxidation, through disulfide bonds, and also via amino and thiol directed cross-linkers. It is smaller and more stable than the enzyme labels β -galactosidase and alkaline phosphatase. Hence, it is the most desired label. Also, its glycosylation leads to lower non-specific binding. It is also used for the determination of glucose and peroxides in solution. Sodium azide, cyanide, L-cystine, dichromate, ethylenethiourea, hydroxylamine, sulfide, vanadate, p-aminobenzoic acid, and Cd^{2+} , Co^{2+} , Cu^{2+} , Fe^{3+} , Mn^{2+} , Ni^{2+} , Pb^{2+} ions are known to inhibit the enzyme activity.

When incubated with a substrate, horseradish peroxidase produces a coloured, fluorimetric, or luminescent derivative of the labeled molecule, allowing quantification.

Définition de l'unité

One pyrogallol unit will form 1.0 mg purpurogallin from pyrogallol in 20 sec at pH 6.0 at 20 °C.

Remarque sur l'analyse

The RZ (Reinheitsszahl) is the absorbance ratio A_{403}/A_{275} determined at 0.5-1.0 mg/ml in deionized water. It is a measure of hemin content, not enzymatic activity. Even preparations with high RZ may have low enzymatic activity.

Autres remarques

View more information on peroxidase at www.sigma-aldrich.com/enzymeexplorer.

PRODUITS APPARENTÉS

Inhibiteur

S2002

Sodium azide, *ReagentPlus*[®], ≥99.5%

[View Pricing](#)

Substrat

D9143

o-Dianisidine, peroxidase substrate

[View Pricing](#)

A0156

N-(4-Aminobutyl)-N-ethylisoluminol, ≥90%

[View Pricing](#)

A4685

Luminol sodium salt

[View Pricing](#)

A1888

2,2'-Azino-bis(3-ethylbenzothiazoline-6-sulfonic acid) diammonium salt, ≥98% (HPLC)

[View Pricing](#)

G5502

Guaiacol, oxidation indicator

[View Pricing](#)

A1661

N-(6-Aminohexyl)-N-ethylisoluminol

[View Pricing](#)

A3537

5-Aminosalicylic acid, ≥99%

[View Pricing](#)

A4382

4-Aminoantipyrine, reagent grade

[View Pricing](#)

A8264

4-Aminophthalhydrazide

[View Pricing](#)**A5754**

3-Amino-9-ethylcarbazole, ≥95% (HPLC), powder

[View Pricing](#)**A8511**

Luminol, ≥97% (HPLC)

[View Pricing](#)

INFORMATIONS SUR LA SÉCURITÉ

Pictograms**GHS08****Mention d'avertissement**

Danger

Mentions de danger**H317 - H334****Conseils de prudence****P261 - P272 - P280 - P284 -
P302 + P352 - P333 + P313****Classification des risques**

Resp. Sens. 1 - Skin Sens. 1

**Code de la classe de
stockage**

11 - Combustible Solids

WGK

WGK 3

**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

Saisir un numéro de lot pour rechercher un certificat d'origine (COO).

Numéro de lot

e.g. 023J5431

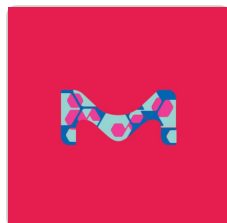
Comment saisir un numéro de lot (COO)

Rechercher

Fiches Techniques

Data Sheet - P8125

Plus De Documents

Enzyme Explorer**FDS****LES CLIENTS ONT ÉGALEMENT CONSULTÉ**

Sigma-Aldrich

A1602**Amyloglucosidase from *Aspergillus niger***
ammonium sulfate suspension, ≥40 units/mg protein[Consulter le prix et la disponibilité](#)

Roche

10108090001**Peroxidase (POD)**
grade I, from horseradish[Consulter le prix et la disponibilité](#)**ARTICLES REVUS PAR DES PAIRS****Cultivar discrimination of Portuguese *Lupinus albus* by seed protein electrophoresis: the importance of considering glutelins and glycoproteins****Vaz A C, et al.***Field Crops Research*, 87(1), 23-34 (2004)**Halofenate is a selective peroxisome proliferator-activated receptor gamma modulator with antidiabetic activity.****Tamara Allen et al.***Diabetes*, 55(9), 2523-2533 (2006-08-29)

Halofenate has been shown previously to lower triglycerides in dyslipidemic subjects. In addition, significant decreases in fasting plasma glucose were observed but only in type 2 diabetic patients. We hypothesized that halofenate might be an insulin sensitizer, and we present

Studies on the oxidative cross-linking of feruloylated arabinoxylans from wheat flour and wheat bran

Schooneveld-Bergmans M E F, et al.

Carbohydrate Polymers, 38(4), 309-317 (1999)

Ischemic preconditioning inhibits mitochondrial respiration, increases H₂O₂ release, and enhances K⁺ transport.

Mirian M da Silva et al.

American journal of physiology. Heart and circulatory physiology, 285(1), H154-H162 (2003-03-08)

Ischemic preconditioning, or the protective effect of short ischemic episodes on a longer, potentially injurious, ischemic period, is prevented by antagonists of mitochondrial ATP-sensitive K⁺ channels (mitoKATP) and involves changes in mitochondrial energy metabolism and reactive oxygen release after ischemia.

Nitroreductase-Mediated Release of Inhibitors of Lysine-Specific Demethylase 1 (LSD1) from Prodrugs in Transfected Acute Myeloid Leukaemia Cells.

Eva-Maria Herrlinger et al.

Chembiochem : a European journal of chemical biology, 21(16), 2329-2347 (2020-04-01)

Lysine-specific demethylase 1 (LSD1) has evolved as a promising therapeutic target for cancer treatment, especially in acute myeloid leukaemia (AML). To approach the challenge of site-specific LSD1 inhibition, we developed an enzyme-prodrug system with the bacterial nitroreductase NfsB (NTR) that

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PROTOCOLES ET ARTICLES SCIENTIFIQUES

Protocoles

[Spectrophotometric Determination of Reinheitszahl \(RZ\) for Peroxidase \(EC 1.11.1.7\)](#)

Reinheitszahl (RZ) is the ratio of absorbance due to hemin (A₄₀₃, Soret region) to absorbance due to protein (A₂₇₅).

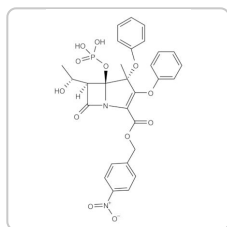
[Enzymatic Assay of Peroxidase \(EC 1.11.1.7\) 2,2'-Azino-bis\(3-Ethylbenzthiazoline-6-Sulfonic Acid\) as a Substrate](#)

To standardize a procedure for the assay of Peroxidase using 2,2'-Azino-bis(3-Ethylbenzthiazoline-6-Sulfonic Acid) as a substrate.

Enzymatic Assay of Peroxidase (EC 1.11.1.7)

This procedure is for the determination of Peroxidase enzymatic activity using Pyrogallol as the substrate.

PRODUITS CONSULTÉS RÉCEMMENT



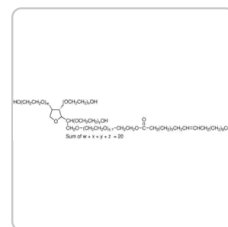
Sigma-Aldrich

P8044

Proteinase K from *Tritirachium album*

≥3.0 unit/mg solid, lyophilized powder

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Sigma-Aldrich

P8074

TWEEN® 80

BioXtra, viscous liquid

[Consulter le prix et la disponibilité](#)

Évaluations



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Questions

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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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