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D2197 ► Sigma-Aldrich.

Diaphorase from *Clostridium kluyveri*

★★★★★ (0)

recombinant, expressed in *E. coli*, Animal-component free

Synonyme(s):

Diaphorase, Lipoamide Dehydrogenase, Lipoyl Dehydrogenase

Numéro de classification
(Commission des enzymes):

1.8.1.4 (BRENDA, IUBMB)

NACRES:

NA.54

Référence	Conditionnement	Disponibilité		Prix	Quantité	
D2197-100UN	100 UNITS	✓ Disponible pour expédition le 07 octobre 2022	Détails...	70,00 €	— +	
D2197-300UN	300 UNITS	✓ Disponible pour expédition le 07 octobre 2022	Détails...	192,00 €	— +	
D2197-500UN	500 UNITS	✓ Disponible pour expédition le 07 octobre 2022	Détails...	244,00 €	— +	

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PRODUITS RECOMMANDÉS



Sigma-Aldrich

D5540**Diaphorase from *Clostridium kluyveri***

lyophilized powder, 3.0-20.0 units/mg protein (biuret)

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Sigma-Aldrich

A3263**Alcohol Dehydrogenase from *Saccharomyces cerevisiae***

≥300 units/mg protein

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PROPRIÉTÉS

Recombinant	expressed in <i>E. coli</i>
Niveau de qualité	200
Forme	solid
specific activity	≥30 units/mg protein (biuret)
Temp. de stockage	-20°C

DESCRIPTION

Application

Diaphorase from *Clostridium kluyveri* has been used in lactate dehydrogenase assay in gill cells and impregnated on the strip for formate dehydrogenase assay.

Diaphorase is used in various assays to oxidate β -NADH or β -NADPH in the presence of an electron acceptor. Diaphorase from *Clostridium Kluyveri* has been used for semiquinone generation during benzoquinone reduction. Product D2197 is animal component free.

Conditionnement

100, 300, 500 units in poly bottle

Actions biochimiques/physiologiques

Diaphorase catalyzes the oxidation of either β -NADH or β -NADPH in the presence of an electron acceptor such as methylene blue or 2,6-dichlorophenolindophenol. Diaphorases which are specific for either β -NADH or β -NADPH are known. The pig heart enzyme of Straub seems to have native diaphorase (β -NADH specific) as well as lipoic and lipoamide dehydrogenase activities. It is reported to be a single protein. However, Massey reports that diaphorase is probably a denatured lipoamide dehydrogenase. Pre-incubation of the pig heart preparation with Cu^{2+} reduces the lipoamide dehydrogenase activity and proportionately increases the β -NADH diaphorase activity. In our laboratory, we have demonstrated this copper effect to some degree on the pig heart enzyme, but no appreciable effect was observed on the *Clostridium kluyveri* or torula yeast preparations. The lipoamide dehydrogenase:diaphorase ratio is a measure of the denaturation.

Définition de l'unité

One unit of diaphorase will oxidize 1.0 micromole of beta-NADH per minute at pH 7.5 at 25 degrees C, with the corresponding reduction of the appropriate electron acceptor.

Forme physique

Supplied as a lyophilized powder containing trehalose.

INFORMATIONS SUR LA SÉCURITÉ

Code de la classe de stockage	WGK	Flash Point(F)	Point d'éclair C
11 - Combustible Solids	WGK 3	Not applicable	Not applicable

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

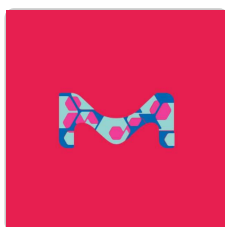
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Rechercher

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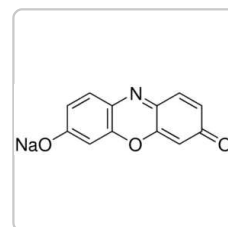
LES CLIENTS ONT ÉGALEMENT CONSULTÉ



Sigma-Aldrich

59747**Lactic Dehydrogenase, recombinant from *E. coli***

≥90 U/mg

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Sigma-Aldrich

R3257**Resorufin sodium salt**

redox indicator

[Consulter le prix et la disponibilité](#)

ARTICLES REVUS PAR DES PAIRS

[Transient Agarose Spot \(TAS\) Assay: A New Method to Investigate Cell Migration.](#)

Apor Veres-Székely et al.*International journal of molecular sciences*, 23(4) (2022-02-27)

Fibroblasts play a central role in diseases associated with excessive deposition of extracellular matrix (ECM), including idiopathic pulmonary fibrosis. Investigation of different properties of fibroblasts, such as migration, proliferation, and collagen-rich ECM production is unavoidable both in basic research and

ChrR, a soluble quinone reductase of *Pseudomonas putida* that defends against H₂O₂.

Claudio F Gonzalez et al.

The Journal of biological chemistry, 280(24), 22590-22595 (2005-04-21)

Most bacteria contain soluble quinone-reducing flavoenzymes. However, no biological benefit for this activity has previously been demonstrated. ChrR of *Pseudomonas putida* is one such enzyme that has also been characterized as a chromate reductase; yet we propose that it is

A novel bedside diagnostic test for methanol poisoning using dry chemistry for formate.

Knut Erik Hovda et al.

Scandinavian journal of clinical and laboratory investigation, 75(7), 610-614 (2015-07-24)

The standard diagnostic approach to methanol poisoning is chromatographic measurement of methanol on centrally placed stationary equipment. Methanol poisoning in places where such equipment is unavailable is thus often not diagnosed. Methanol is metabolized to a toxic metabolite, formate; the

Isolation and sequence determination of cDNA clones for porcine and human lipoamide dehydrogenase. Homology to other disulfide oxidoreductases.

G Otulakowski et al.

The Journal of biological chemistry, 262(36), 17313-17318 (1987-12-25)

A 2.3-kilobase cDNA clone encoding lipoamide dehydrogenase was isolated from a porcine adrenal medulla library in the vector pCD by screening with four synthetic oligonucleotide probes corresponding to amino acid sequence from tryptic peptides of porcine lipoamide dehydrogenase. A 450-bp

Mutations in the dimer interface of dihydrolipoamide dehydrogenase promote site-specific oxidative damages in yeast and human cells.

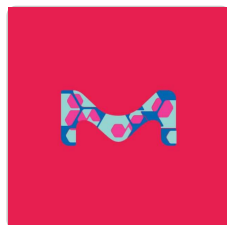
Rachael A Vaubel et al.

The Journal of biological chemistry, 286(46), 40232-40245 (2011-09-21)

Dihydrolipoamide dehydrogenase (DLD) is a multifunctional protein well characterized as the E3 component of the pyruvate dehydrogenase and α -ketoglutarate dehydrogenase complexes. Previously, conditions predicted to destabilize the DLD dimer revealed that DLD could also function as a diaphorase and serine

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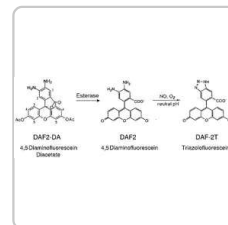
PRODUITS CONSULTÉS RÉCEMMENT



Sigma-Aldrich

D224**4,5-Diaminofluorescein**

5 mM in DMSO, ≥97% (HPLC)

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Sigma-Aldrich

D225**4,5-Diaminofluorescein diacetate solution**

5 mM in DMSO, ≥97% (HPLC)

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Évaluations

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