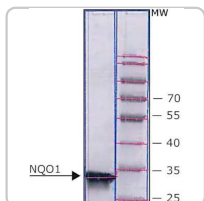


Saisir le nom du produit, le numéro de lot, etc.

[Toutes les photos](#) (2)

Documents

[↓ FDS](#)[🔍 COO/COA](#)[📄 Fiche des caractéristiques](#)[Plus de documents](#) >>**D1315** ▶ **Sigma-Aldrich.**

DT Diaphorase (NQO1) human

★★★★★ (0)

lyophilized powder, recombinant, expressed in *E. coli*, ≥90% (SDS-PAGE)

Synonyme(s):

DTD, NQO1, Quinone reductase

Numéro de classification
(Commission des enzymes):**1.6.5.2 (BRENDA, IUBMB)**

Numéro MDL:

MFCD00130947

NACRES:

NA.54

Référence	Conditionnement	Disponibilité	Prix	Quantité
D1315-1MG	1 MG	✓ Disponible pour expédition le 07 octobre 2022	Détails... 324,00 €	- + i

[Demander une commande en gros](#)[Ajouter au panier](#)

PRODUITS RECOMMANDÉS

Sigma-Aldrich

Sigma-Aldrich

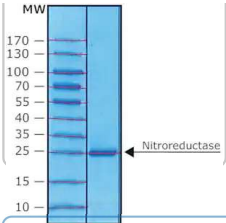


SRP6539

NQO1 human

recombinant, expressed in *E. coli*, ≥90% (SDS-PAGE)

[Consulter le prix et la disponibilité](#)



N9284

Nitroreductase from *Escherichia coli*

≥90% (SDS-PAGE), recombinant, expressed in *E. coli*

[Consulter le prix et la disponibilité](#)



PROPRIÉTÉS

Recombinant	expressed in <i>E. coli</i>
Niveau de qualité	200
Essai/Dosage	≥90% (SDS-PAGE)
Forme	lyophilized powder
specific activity	≥100 units/mg protein
Poids mol.	monomer 31000
N° d'accession UniProt	P15559
Temp. de stockage	2-8°C
Gene Information	human ... NQO1(1728)

DESCRIPTION

Application

Human DT diaphorase has been used in a study to assess the development of novel quinone phosphorodiamidate prodrugs. Human DT diaphorase has also been used to investigate its crystal structure for the development of a model for its interaction with the cytotoxic prodrug 5-(aziridin-1-yl)-2,4-dinitrobenzamide (CB1954).

Actions biochimiques/physiologiques

DT-diaphorase, also referred to as NAD(P)H:(quinone-acceptor) oxidoreductase, is involved in the reductive activation process of several cytotoxic antitumor quinones and nitrobenzenes. It catalyzes the two-electron reduction of quinones and quinonoid compounds to hydroquinones, using either NADH or NADPH as the electron donor. The flavoenzyme contains one mole of FAD per mole of enzyme.

NQO1 is a cytosolic homodimeric FAD-dependent enzyme that catalyses the reduction of a broad range of cytotoxic quinones resulting in protection from cellular oxidative stress. Oxidative stress may also enhance NQO1-mediated protection of p53 and p73 against proteasomal degradation. The highly Inducible expression of NQO1 is controlled by the Nrf2-Keap1/ARE pathway and appears to be affected by changes in susceptibility to oxidative stress. During Oxygen/glucose deprivation, NQO1 appears to be involved in AMPK-induced cancer cell death. NQO1 has been observed to be overexpressed in several types of solid tumors, including breast, pancreas, lung and colon cancer.

Shown to activate quinone based anti-tumor agents *in vivo*. Suitable for conjugation to carrier molecules.

Définition de l'unité

One unit will reduce 1.0 μ mole cytochrome C per min/mg in the presence of menadione substrate at 37 °C.

PRODUITS APPARENTÉS

Inhibiteur

M1390

3,3'-Methylene-bis(4-hydroxycoumarin)

[View Pricing](#)

Produit Apparenté

S4441

DL-Sulforaphane, ≥90% (HPLC), synthetic, liquid

[View Pricing](#)

HPA007308

Anti-NQO1 antibody produced in rabbit, Prestige Antibodies® Powered by Atlas Antibodies, affinity isolated antibody, buffered aqueous glycerol solution

[View Pricing](#)

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

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

Numéro de lot

e.g. 023J5431

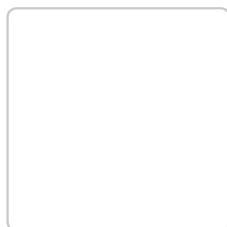
Comment saisir un numéro de lot (COO)

[Rechercher](#)

Plus De Documents

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

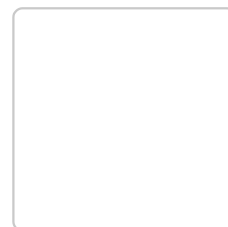
LES CLIENTS ONT ÉGALEMENT CONSULTÉ



Sigma-Aldrich

M1390

3,3'-Methylene-bis(4-hydroxycoumarin)

[Consulter le prix et la disponibilité](#)

Sigma-Aldrich

H3631

Hyaluronidase from bovine testes

Type VI-S, lyophilized powder, 3,000-15,000 units/mg solid

[Consulter le prix et la disponibilité](#)

ARTICLES REVUS PAR DES PAIRS

[Development of novel quinone phosphorodiamidate prodrugs targeted to DT-diaphorase.](#)

C Flader et al.*Journal of medicinal chemistry*, 43(16), 3157-3167 (2000-08-24)

A series of naphthoquinone and benzimidazolequinone phosphorodiamidates has been synthesized and studied as potential cytotoxic prodrugs activated by DT-diaphorase. Reduction of the quinone moiety in the target compounds was expected to provide a pathway for expulsion of the phosphoramidate mustard

Molecular of Modelling of Human DT-Diaphorase for Enzyme-Directed Bioreductive Drug Design.

Doughtyl, S.W. and Phillips, R.M.

Molecular Simulations, 24, 209-209 (2000)

Clinical implications of high NQO1 expression in breast cancers.

Yang Yang et al.

Journal of experimental & clinical cancer research : CR, 33, 14-14 (2014-02-07)

NAD (P) H: quinone oxidoreductase 1 (NQO1) is a xenobiotic metabolizing enzyme that detoxifies chemical stressors and antioxidants, providing cytoprotection in normal tissues. However, high-level expression of NQO1 has been correlated with numerous human malignancies, suggesting a role in carcinogenesis

Molecular basis of the catalytic differences among DT-diaphorase of human, rat, and mouse.

S Chen et al.

The Journal of biological chemistry, 272(3), 1437-1439 (1997-01-17)

DT-diaphorase (EC 1.6.99.2), also referred to as NAD(P)H:(quinone-acceptor) oxidoreductase, is involved in the reductive activation process of several cytotoxic antitumor quinones and nitrobenzenes. It has been observed in our and other laboratories that the rat enzyme is significantly more effective

More accuracy to the EROD measurements--the resorufin fluorescence differs between species and individuals.

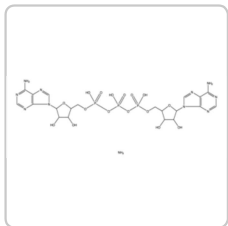
Eeva-Riikka Vehniäinen et al.

Aquatic toxicology (Amsterdam, Netherlands), 116-117, 102-108 (2012-04-10)

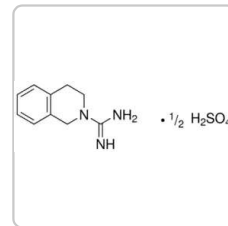
Ethoxyresorufin-O-deethylase (EROD) activity is a biomarker of exposure to planar aromatic hydrocarbons, and it is often measured from the S9 fraction. The effect of the liver S9 fraction of seven boreal freshwater fish species on the fluorescence of resorufin was

Afficher tous les articles scientifiques apparentés

PRODUITS CONSULTÉS RÉCEMMENT



Sigma-Aldrich

D1387**P¹,P³-Di(adenosine-5') triphosphate
ammonium salt**[Consulter le prix et la disponibilité](#)

Sigma-Aldrich

D1306**Debrisoquine sulfate**[Consulter le prix et la disponibilité](#)

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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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