

Recombinant Rat NAD(P)H Dehydrogenase, Quinone 1

Cat. No. Nqo1-721R **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Species	Rat
Source	E.coli
Description	NQO1 is a member of the NAD(P)H dehydrogenase (quinone) family and encodes a cytoplasmic 2-electron reductase. This protein apparently serves as a quinone reductase in connection with conjugation reactions of hydroquinones involved in detoxification pathways as well as in biosynthetic processes such as the vitamin K-dependent gamma-carboxylation of glutamate residues in prothrombin synthesis. NQO1 functions as an important part of cellular antioxidant defense by detoxifying quinines thus preventing the formation of reactive oxygen species. Altered expression of NQO1 has been seen in many tumors and is also associated with Alzheimer's disease (AD).
Biochem/physiol Actions	Shown to activate quinone based anti-tumor agents in vivo. Suitable for conjugation to carrier molecules.
Other Notes	Catalytic activity is different from human source DT diaphorase.
Unit Definition	One unit will reduce 1.0 μ mole cytochrome C per min/mg in the presence of menadione substrate at 37 °C.
Physical Form	Lyophilized powder containing approx. 5% protein balance lactose and PBS buffer

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	salts.
Assay	~90% (SDS-PAGE).
Form	lyophilized powder.
Mol Wt	monomer mol wt 31000.
Storage Temp	2-8°C.

GENE INFORMATION

Gene Name	Nqo1 NAD(P)H dehydrogenase, quinone 1 [<i>Rattus norvegicus</i>]
Synonyms	NAD(P)H dehydrogenase, quinone 1; Dia4; MGC93075; Nqo1; NAD(P)H dehydrogenase [quinone] 1; DTDQR1; azoreductase; DT-diaphorase; menadione reductase; quinone reductase 1; Diaphorase (NADH/NADPH); phyloquinone reductase; NAD(P)H:menadione oxidoreductase; NAD(P)H:quinone oxidoreductase 1
Gene ID	24314
mRNA Refseq	NM_017000
Protein Refseq	NP_058696
UniProt ID	P05982
Chromosome Location	19q12
Function	NAD(P)H dehydrogenase (quinone) activity; coenzyme binding; electron carrier

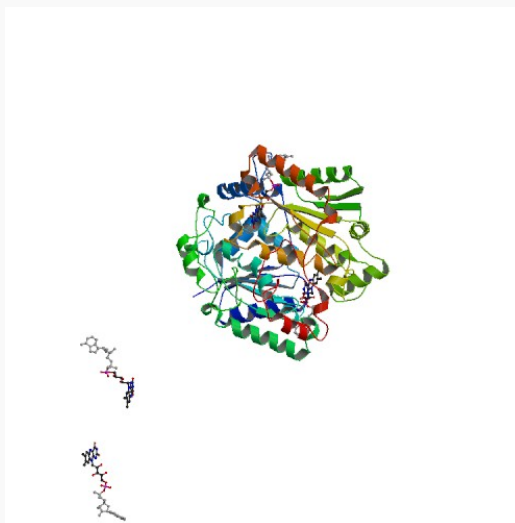
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activity; oxidoreductase activity

PDB rendering based
on 1d4a.



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