

## Active Recombinant Human NQO1 Protein

Cat. No. NQO1-001H Lot. No. (See product label)

### SPECIFICATION

<b>Product Overview</b>	Recombinant human NQO1 protein without tag, was expressed in E. coli.
<b>Species</b>	Human
<b>Source</b>	E.coli
<b>Description</b>	<p>This gene is a member of the NAD(P)H dehydrogenase (quinone) family and encodes a cytoplasmic 2-electron reductase. This FAD-binding protein forms homodimers and reduces quinones to hydroquinones. This protein's enzymatic activity prevents the one electron reduction of quinones that results in the production of radical species. Mutations in this gene have been associated with tardive dyskinesia (TD), an increased risk of hematotoxicity after exposure to benzene, and susceptibility to various forms of cancer. Altered expression of this protein has been seen in many tumors and is also associated with Alzheimer's disease (AD). Alternate transcriptional splice variants, encoding different isoforms, have been characterized. [provided by RefSeq, Jul 2008]</p>
<b>Form</b>	lyophilized powder
<b>Bio-activity</b>	≥100 units/mg protein
<b>Molecular Mass</b>	monomer mol wt 31000
<b>Purity</b>	≥90% (SDS-PAGE)

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<b>Unit Definition</b>	One unit will reduce 1.0 $\mu$ mole cytochrome C per min/mg in the presence of menadione substrate at 37 centigrade.
<b>Applications</b>	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.
<b>Storage</b>	2-8 centigrade
<b>GENE INFORMATION</b>	
<b>Gene Name</b>	NQO1
<b>Official Symbol</b>	NQO1 NAD(P)H quinone dehydrogenase 1 [ Homo sapiens (human) ]
<b>Synonyms</b>	NQO1; NAD(P)H quinone dehydrogenase 1; DTD; QR1; DHQU; DIA4; NMOR1; NMORI; NAD(P)H dehydrogenase [quinone] 1; DT-diaphorase; NAD(P)H dehydrogenase, quinone 1; NAD(P)H:Quinone acceptor oxidoreductase type 1; NAD(P)H:menadione oxidoreductase 1; NAD(P)H:quinone oxidoreductase 1; NAD(P)H:quinone oxidoreductase; azoreductase; diaphorase (NADH/NADPH) (cytochrome b-5 reductase); diaphorase-4; dioxin-inducible 1; menadione reductase; phyloquinone reductase; quinone reductase 1; EC 1.6.5.2
<b>Gene ID</b>	1728
<b>mRNA Refseq</b>	NM_000903
<b>Protein Refseq</b>	NP_000894
<b>MIM</b>	125860

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