Active Recombinant Human NQO1 Protein

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

SPECIFICATION

Product Overview	Recombinant human NQO1 protein without tag, was expressed in E. coli.
Species	Human
Source	E.coli
Description	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]
Form	lyophilized powder
Bio-activity	≥100 units/mg protein
Molecular Mass	monomer mol wt 31000
Purity	≥90% (SDS-PAGE)

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Unit Definition	One unit will reduce 1.0 µmole cytochrome C per min/mg in the presence of menadione substrate at 37 centigrade.
Applications	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 t he cytotoxic prodrug 5-(aziridin-1-yl)-2,4-dinitrobenzamide.
Storage	2-8 centigrade

GENE INFORMATION

Gene Name	NQO1
Official Symbol	NQO1 NAD(P)H quinone dehydrogenase 1 [Homo sapiens (human)]
Synonyms	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 oxireductase; azoreductase; diaphorase (NADH/NADPH) (cytochrome b-5 reductase); diaphorase-4; dioxin-inducible 1; menadione reductase; phylloquinone reductase; quinone reductase 1; EC 1.6.5.2
Gene ID	1728
mRNA Refseq	NM_000903
Protein Refseq	NP_000894
MIM	125860

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UniProt ID	P15559

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