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## Product Data Sheet

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Product Name: NQO1 Human  
 Cat. No.: GP22011  
 Batch No.: 1

### Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	NAD(P)H dehydrogenase (quinone) 1; Quinone reductase 1; QR1; NAD(P)H:quinone oxidoreductase 1; DT-diaphorase; DTD; Azoreductase; Phylloquinone reductase; Menadione reductase; NQO1; DIA4; NMOR1; DHQU; NMORI.		
Amino Acid Sequence	MGSSHHHHHH SSGLVPRGSH MVGRRALIVL AHSERTSFNY AMKEAAAAAL KKKGWEEVES DLYAMNFNPI ISRKDITGKL KDPANFQYPA ESVLAYKEGH LSPDIVAEQK KLEAADLVIF QFPLQWFGVP AILKGFVERV FIGEFAYTYA AMYDKGPFERS KKAVLSITTG GSGSMYSLQG IHGDMNVILW PIQSGILHFC GFQVLEPQLT YSIGHTPADA RIQILEGWKK RLENIWDETP LYFAPSSLFD LNFQAGFLMK KEVQDEEKNK KFGLSVGHHL GKS IPTDNQI KARK.		
Formulation	The NQO1 solution contains 20mM Tris-HCl buffer (pH 8.0), 10% glycerol and 1mM DTT.		

### Introduction

NQO1 belongs to the NAD(P)H dehydrogenase (quinone) family and encodes a cytoplasmic 2-electron reductase. NQO1 acts as an imperative part of cellular antioxidant defense by detoxifying quinines therefore preventing the formation of reactive oxygen species. It seems that NQO1 serves as a quinone reductase relating to conjugation reactions of hydroquinons involved in detoxification pathways in addition to biosynthetic processes such as the vitamin K-dependent gamma-carboxylation of glutamate residues in prothrombin synthesis. Altered NQO1 expression is seen in many tumors and also linked to Alzheimer's disease. NQO1 gene mutations are linked to tardive dyskinesia which is an increased risk of hematotoxicity after exposure to benzene, and susceptibility to various forms of cancer.

### Stability

**Caution: Product has not been fully validated for medical applications. For research use only.**

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Address: 10292 Central Ave. #205, Montclair, CA, USA

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Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

### Background

NQO1 Human Recombinant fused with a 20 amino acids His tag at N-terminus produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 294 amino acids (1-274 a.a.) and having a molecular mass of 33kDa. The NQO1 is purified by proprietary chromatographic techniques.

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