

Recombinant Human NAD(P)H Dehydrogenase, Quinone 1, His-tagged

Cat. No. NQO1-1393H Lot. No. (See product label)

SPECIFICATION

Product Overview

NQO1 Human Recombinant fused with 20 amino acid 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.

Species

Human

Source

Human

ProteinLength

1-274 a.a.

Description

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 hydroquinones 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.

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Form	The NQO1 solution contains 20mM Tris-HCL buffer (pH 8.0), 10% glycerol and 1mM DTT.
Purity	Greater than 95.0% as determined by SDS-PAGE.
Physical Appearance	Sterile Filtered colorless solution.
Storage	NQO1 although stable 4°C for 4 weeks, should be stored desiccated below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

GENE INFORMATION

Gene Name	NQO1 NAD(P)H dehydrogenase, quinone 1 [Homo sapiens]
Official Symbol	NQO1
Synonyms	NQO1; DTD; QR1; DHQU; DIA4; NMOR1; NMORI; NAD(P)H dehydrogenase [quinone] 1; azoreductase; diaphorase-4; DT-diaphorase; OTTHUMP00000174897; OTTHUMP00000174898; dioxin-inducible 1; menadione reductase; quinone reductase 1; phyloquinone reductase; NAD(P)H:quinone oxireductase; NAD(P)H:quinone oxidoreductase 1; NAD(P)H:menadione oxidoreductase 1; NAD(P)H:Quinone acceptor oxidoreductase type 1 ; diaphorase (NADH/NADPH) (cytochrome b-5 reductase)
Gene ID	1728
mRNA Refseq	NM_000903
Protein Refseq	NP_000894

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MIM	125860
UniProt ID	P15559
Chromosome Location	16q22.1
Pathway	Keap1-Nrf2 Pathway; Metabolism of amino acids and derivatives; Oxidative Stress; Regulation of ornithine decarboxylase (ODC)
Function	NAD(P)H dehydrogenase (quinone) activity; coenzyme binding; cytochrome-b5 reductase activity; electron carrier activity; oxidoreductase activity
PDB rendering based on 1d4a	