

Recombinant human NQO1 protein

Catalog Number: ATGP3876

PRODUCT INFORMATION

Expression system

E.coli

Domain

1-274aa

UniProt No.

P15559

NCBI Accession No.

NP_000894

Alternative Names

NAD(P)H quinone dehydrogenase 1, NMOR1, DIA4, Diaphorase, NADH/NADPH, Cytochrome b-5 reductase, NAD(P)H dehydrogenase, Quinone 1, DHQU, QR1, Azoreductase, DT-diaphorase, DTD, Menadione reductase, NAD(P)H:quinone oxidoreductase 1, Phylloquinone reductase, Quinone reductase 1

PRODUCT SPECIFICATION

Molecular Weight

33.0 kDa (294aa) confirmed by MALDI-TOF

Concentration

1mg/ml (determined by Bradford assay)

Formulation

Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 10% glycerol 1mM DTT

Purity

> 95% by SDS-PAGE

Endotoxin level

< 1 EU per 1ug of protein (determined by LAL method)

Biological Activity

Specific activity is > 1,000pmol/min/ug and is defined as the amount of enzyme that converts 1pmole of resazurin to resorufin per minute at pH 7.5 at 25C.

Tag

His-Tag

Application

SDS-PAGE, Enzyme Activity

Storage Condition

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

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BACKGROUND

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). Recombinant human NQO1, was expressed in *E. coli* and purified by using conventional chromatography techniques.

Amino acid Sequence

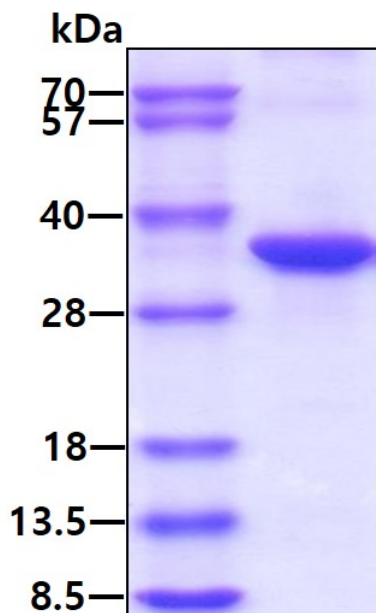
<MGSSHHHHHH SGLVPRGSH> MVGRRALIVL AHSERTSFNY AMKEAAAAAL KKKGWEEVES DLYAMNFNPI
ISRKDITGKL KDPANFQYPA ESVLAYKEGH LSPDIVAEQK KLEAADLVIF QFPLQWFGVP AILKGWFERV FIGEFAYTYA
AMYDKGPFRR KKAVLSITTG GSGSMYSLQG IHGDMNVILW PIQSGILHFC GFQVLEPQLT YSIGHTPADA RIQILEGWKK
RLENIWDETP LYFAPSSLFD LNFQAGFLMK KEVQDEEKNK KFGLSVGHHL GKSIPTDNQI KARK

General References

Jaiswal AK., et al. (1988) *J Biol Chem.* 263(27):13572-8.
Traver RD., et al. (1992) *Cancer Res.* 52(4):797-802.

DATA

SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.