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32-6863: NQO1 Human, Active

Application :	Functional Assay
Alternative Name :	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.

Description

Source: Escherichia Coli.
Sterile Filtered colorless solution.
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.
NQO1 Human Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 294 amino acids (1-274aa) and having a molecular mass of 33.0 kDa. NQO1 is fused to a 20 amino acid His tag at N-terminus and purified by proprietary chromatographic techniques.

Product Info

Amount :	1 µg / 5 µg
Purification :	Greater than 95.0% as determined by SDS-PAGE.
Content :	The NQO1 solution (1 mg/ml) contains 20mM Tris-HCl buffer (pH 8.0), 1mM DTT and 10% glycerol.
Storage condition :	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.
Amino Acid :	MGSSHHHHHH SSGLVPRGSH MVGRRALIVL AHSERTSFNY AMKEAAAAAL KKKGWEVVESDLYAMNFNPI ISRKDITGKL KDPANFQYPA ESVLAYKEGH LSPDIVAEQK KLEAADLVIFQFPLQWFGVP AILKGWFERV FIGEFAYTYA AMYDKGPFRS KKAVLSITTG GSGSMYSLQGIHGDMNVILW PIQSGILHFC GFQVLEPQLT YSIGHTPADA RIQILEGWKK RLENIWDETPLYFAPSSLFD LNFQAGFLMK KEVQDEEKNK KFGLSVGHHL GKSIPTDNQI KARK

Application Note

Specific activity is > 1,000 pmol/min/ug. One unit will convert 1 pmoles resazurin to resorufin per minute at pH 7.5 at 25Â°C.