

NQO1 Polyclonal Antibody

Catalog # AP71369

Product Information

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|--------------------------|------------------------|
| Application | WB, IF, ICC, E |
| Primary Accession | P15559 |
| Reactivity | Human, Rat, Mouse |
| Host | Rabbit |
| Clonality | Polyclonal |
| Calculated MW | 30868 |

Additional Information

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|---------------------------|--|
| Gene ID | 1728 |
| Other Names | NQO1; DIA4; NMOR1; NAD(P)H dehydrogenase [quinone] 1; Azoreductase; DT-diaphorase; DTD; Menadione reductase; NAD(P)H:quinone oxidoreductase 1; Phylloquinone reductase; Quinone reductase 1; QR1 |
| Dilution | WB~~Western Blot: 1/500 - 1/2000. ELISA: 1/10000. Not yet tested in other applications. IF~~1:50~200 ICC~~N/A E~~N/A |
| Format | Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide. |
| Storage Conditions | -20°C |

Protein Information

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|-----------------|---|
| Name | NQO1 {ECO:0000303 PubMed:1657151, ECO:0000312 HGNC:HGNC:2874} |
| Function | Flavin-containing quinone reductase that catalyzes two- electron reduction of quinones to hydroquinones using either NADH or NADPH as electron donors. In a ping-pong kinetic mechanism, the electrons are sequentially transferred from NAD(P)H to flavin cofactor and then from reduced flavin to the quinone, bypassing the formation of semiquinone and reactive oxygen species (By similarity) (PubMed: 8999809 , PubMed: 9271353). Regulates cellular redox state primarily through quinone detoxification. Reduces components of plasma membrane redox system such as coenzyme Q and vitamin quinones, producing antioxidant hydroquinone forms. In the process may function as superoxide scavenger to prevent hydroquinone oxidation and facilitate excretion (PubMed: 15102952 , PubMed: 8999809 , PubMed: 9271353). Alternatively, can activate quinones and their derivatives by generating redox reactive hydroquinones with DNA cross-linking antitumor potential (PubMed: 8999809). Acts as a gatekeeper of the core 20S proteasome known to degrade proteins with unstructured regions. Upon oxidative stress, interacts with tumor suppressors TP53 and TP73 in a |

NADH-dependent way and inhibits their ubiquitin-independent degradation by the 20S proteasome (PubMed:[15687255](#), PubMed:[28291250](#)).

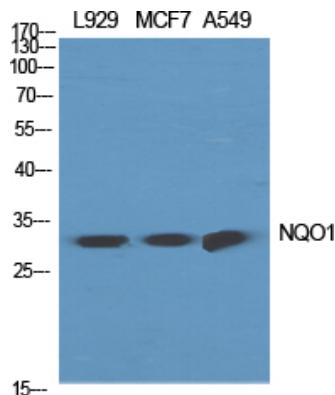
Cellular Location

Cytoplasm, cytosol {ECO:0000250 | UniProtKB:P05982}

Background

The enzyme 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.

Images



Western Blot analysis of various cells using NQO1 Polyclonal Antibody diluted at 1 : 2000



Western Blot analysis of Jurkat cells using NQO1 Polyclonal Antibody diluted at 1 : 2000

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.