

NQO1 Antibody (Center)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7350C

Specification

NQO1 Antibody (Center) - Product Information

Application	IF, WB, FC,E
Primary Accession	P15559
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Antigen Region	118-144

NQO1 Antibody (Center) - Additional Information

Gene ID 1728

Other Names

NAD(P)H dehydrogenase [quinone] 1, Azoreductase, DT-diaphorase, DTD, Menadione reductase, NAD(P)H:quinone oxidoreductase 1, Phylloquinone reductase, Quinone reductase 1, QR1, NQO1, DIA4, NMOR1

Target/Specificity

This NQO1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 118-144 amino acids from the Central region of human NQO1.

Dilution

IF~~1:10~50
WB~~1:1000
FC~~1:10~50

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

NQO1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

NQO1 Antibody (Center) - Protein Information

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

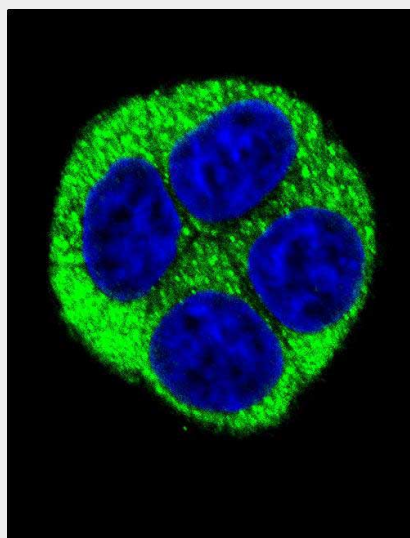
Cytoplasm, cytosol {ECO:0000250|UniProtKB:P05982}

NQO1 Antibody (Center) - Protocols

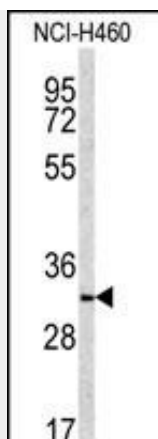
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

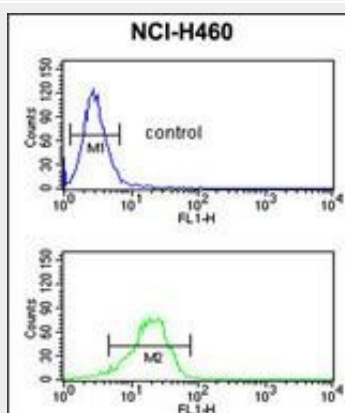
NQO1 Antibody (Center) - Images



Confocal immunofluorescent analysis of NQO1 Antibody (Center)(Cat#AP7350c) with HeLa cell followed by Alexa Fluor 488-conjugated goat anti-rabbit IgG (green). DAPI was used to stain the cell nuclear (blue).



Western blot analysis of NQO1 antibody (Center) (Cat.#AP7350c) in NCI-H460 cell line lysates (35ug/lane). NQO1 (arrow) was detected using the purified Pab.



NQO1 antibody (Center) (Cat.#AP7350c) flow cytometric analysis of NCI-H460 cells (bottom histogram) compared to a negative control cell (top histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

NQO1 Antibody (Center) - Background

NQO1 is a member of the NAD(P)H dehydrogenase(quinone) family and a cytoplasmic 2-electron reductase. This FAD-binding protein forms homodimers and reduces quinones to hydroquinones. This protein's enzymatic activity prevents the one electron reduction of quinones that results in the production of radical species. Altered expression of the protein has been seen in many tumors and is also associated with Alzheimer's disease (AD).

NQO1 Antibody (Center) - References

Hubackova,M., Vaclavikova,R. Pharmacogenet. Genomics 19 (7), 505-512 (2009) Canova,C., Hashibe,M. Cancer Res. 69 (7), 2956-2965 (2009) Li,Y. and Jaiswal,A.K. J. Biol. Chem. 267 (21), 15097-15104 (1992)