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NQO1 Antibody

Rabbit mAb
Catalog # AP91141

Product Information

Application	WB, IF, FC, ICC, IP
Primary Accession	P15559
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Other Names	Azoreductase; DT-diaphorase; DTD; QR1; NQO1; DIA4; NMOR1;
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	30868

Additional Information

Dilution	WB 1:1000~1:5000 ICC/IF 1:50~1:200 IP 1:50 FC 1:50
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human NQO1
Description	NAD(P)H:quinone oxidoreductase 1 (NQO1) is a flavoprotein that catalyzes the two-electron reduction of quinones and their derivatives. The enzyme apparently serves as a quinone reductase in connection with conjugation reactions of hydroquinons involved in detoxification pathways as well as in biosynthetic processes such as the vitamin K-dependent gamma-carboxylation of glutamate residues in prothrombin synthesis.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

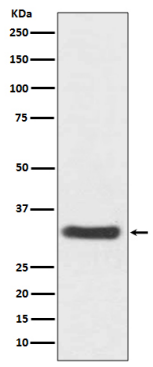
Protein Information

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}

Images



Western blot analysis of NQO1 expression in SH-SY5Y cell lysate.

Image not found : 202311/AP91141-IF.jpg

Immunofluorescent analysis of MCF-7 cells, using NQO1 Antibody.

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