

Anti-NQO1/Dt Diaphorase Rabbit Monoclonal Antibody

Catalog # ABO13522

Product Information

Application	WB, IF, ICC, IP, FC
Primary Accession	P15559
Host	Rabbit
Isotype	Rabbit IgG
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Liquid
Description	Anti-NQO1/Dt Diaphorase Rabbit Monoclonal Antibody . Tested in WB, ICC/IF, IP, Flow Cytometry applications. This antibody reacts with Human, Mouse, Rat.

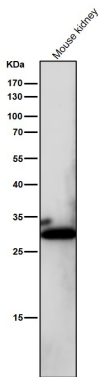
Additional Information

Gene ID	1728
Other Names	NAD(P)H dehydrogenase [quinone] 1, 1.6.5.2, Azoreductase, DT-diaphorase, DTD, Menadione reductase, NAD(P)H:quinone oxidoreductase 1, Phylloquinone reductase, Quinone reductase 1, QR1, NQO1 {ECO:0000303 PubMed:1657151, ECO:0000312 HGNC:HGNC:2874}
Calculated MW	30868
Application Details	WB 1:1000-1:5000 ICC/IF 1:50-1:200 IP 1:50 FC 1:50
Subcellular Localization	Cytoplasm.
Source	Eukaryota
Contents	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
Clone Names	Clone: AAOB-14
Immunogen	A synthesized peptide derived from human NQO1
Purification	Affinity-chromatography
Storage	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

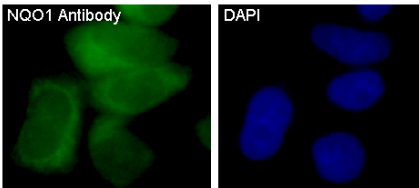
Protein Information

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



All lanes use the Antibody at 1:1w dilution for 1 hour at room temperature.



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

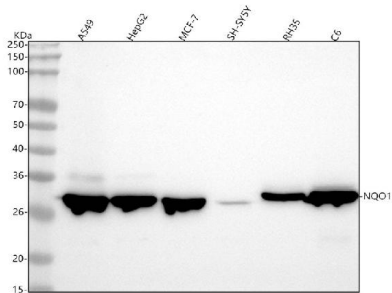


Figure 1. Western blot analysis of NQO1 using anti-NQO1 antibody (M00494). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human A549 whole cell lysates, Lane 2: human HepG2 whole cell lysates, Lane 3: human MCF-7 whole cell lysates, Lane 4: human SH-SY5Y lysates, Lane 5: rat RH35 whole cell lysates, Lane 6: rat C6 whole cell lysates. After electrophoresis, proteins were transferred to a

nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-NQO1 antigen affinity purified monoclonal antibody (Catalog # M00494) at 1:1000 overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for NQO1 at approximately 27,31 kDa. The expected band size for NQO1 is at 31 kDa.

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