

Anti-NQO1/Dt Diaphorase Rabbit Monoclonal Antibody Catalog # ABO13522

Specification

Anti-NQO1/Dt Diaphorase Rabbit Monoclonal Antibody - 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.

Anti-NQO1/Dt Diaphorase Rabbit Monoclonal Antibody - 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 MW KDa

Application Details

WB 1:1000-1:5000
ICC/IF 1:50-1:200
IP 1:50
FC 1:50

Subcellular Localization

Cytoplasm.

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.

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.

Anti-NQO1/Dt Diaphorase Rabbit Monoclonal Antibody - 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

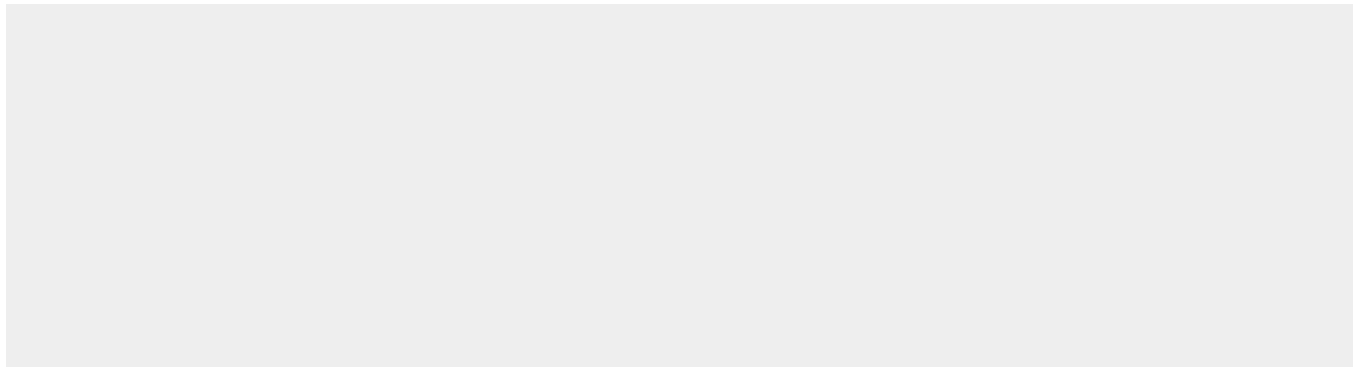
Cytoplasm, cytosol {ECO:0000250|UniProtKB:P05982}

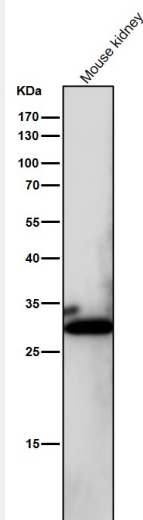
Anti-NQO1/Dt Diaphorase Rabbit Monoclonal Antibody - Protocols

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

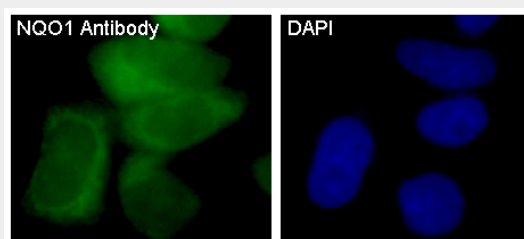
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Anti-NQO1/Dt Diaphorase Rabbit Monoclonal Antibody - 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.

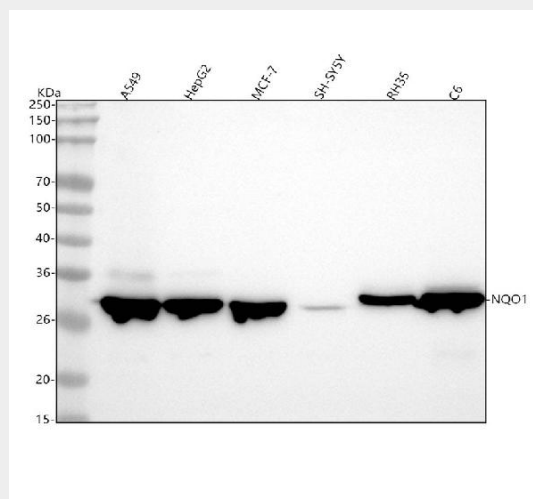


Figure 1. Western blot analysis of NQO1 using anti-NQO1 antibody (M00494). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

- 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.