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KD-Validated Anti-NAD(P)H Quinone Dehydrogenase 1 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1602

Specification

KD-Validated Anti-NAD(P)H Quinone Dehydrogenase 1 Rabbit Monoclonal Antibody - Product Information

Application	**WB, FC, ICC**
Primary Accession	P15559
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 31 kDa , observed , 29 kDa KDa**
Gene Name	**NQO1**
Aliases	**NAD(P)H Quinone Dehydrogenase 1; QR1; DTD; DT-Diaphorase; NMOR1; DHQU; DIA4; Diaphorase (NADH/NADPH) (Cytochrome B-5 Reductase); NAD(P)H Dehydrogenase [Quinone] 1; NAD(P)H Dehydrogenase, Quinone 1; NAD(P)H:Quinone Oxidoreductase 1; NAD(P)H-Quinone Oxidoreductase; Phylloquinone Reductase; Menadione Reductase; Quinone Reductase 1; Azoreductase; EC 1.6.5.2; NAD(P)H:Quinone Acceptor Oxidoreductase Type 1; NAD(P)H:Menadione Oxidoreductase 1; NAD(P)H:Quinone Oxireductase; Dioxin-Inducible 1; Quinone Reductase; Diaphorase-4; NMORI**
Immunogen	**A synthesized peptide derived from human NQO1**

KD-Validated Anti-NAD(P)H Quinone Dehydrogenase 1 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}

KD-Validated Anti-NAD(P)H Quinone Dehydrogenase 1 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}

KD-Validated Anti-NAD(P)H Quinone Dehydrogenase 1 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 Cytomety
- Cell Culture

KD-Validated Anti-NAD(P)H Quinone Dehydrogenase 1 Rabbit Monoclonal Antibody - Images

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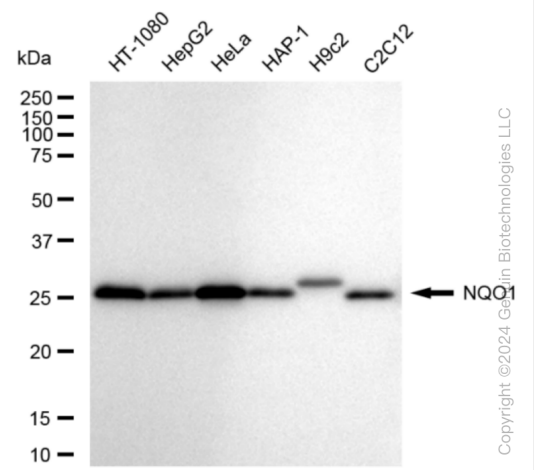
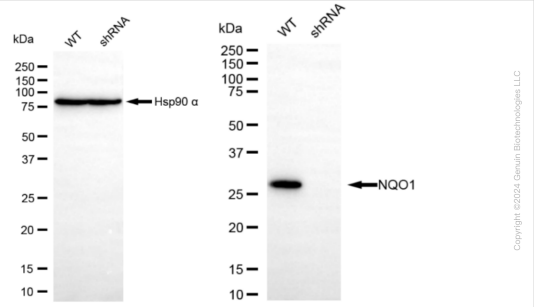
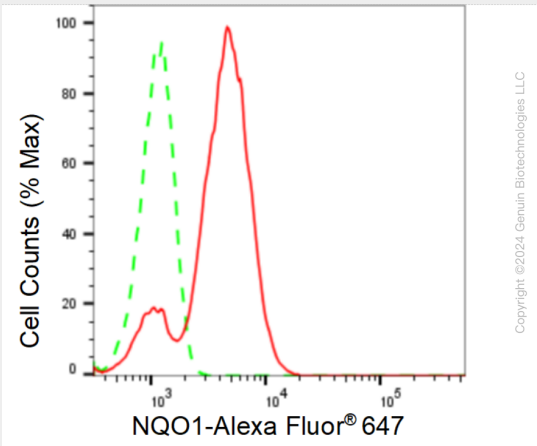


Western blotting analysis using anti-NQO1 antibody (Cat#AGI1602). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-NQO1 antibody (Cat#AGI1602, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-NQO1 antibody (Cat#AGI1602). NQO1 expression in wild type (WT) and NQO1 shRNA knockdown (KD) HeLa cells with 20 µg of total cell lysates. β-Tubulin serves as a loading control. The blot was incubated with anti-NQO1 antibody (Cat#AGI1602, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of NQO1 expression in HT-1080 cells using NQO1 antibody (Cat#AGI1602, 1:2,000). Green, isotype control; red, NQO1.

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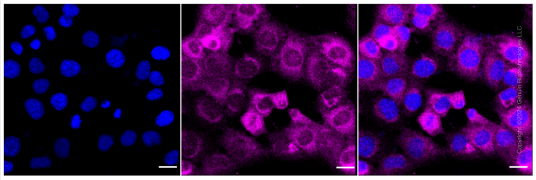

Immunocytochemical staining of HT-1080 cells with anti-NQO1 antibody (Cat#AGI1602, 1:1,000). Nuclei were stained blue with DAPI; NQO1 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20 µm.