

# NQO1 (isoform a) Antibody (internal region)

Peptide-affinity purified goat antibody Catalog # AF3483a

### Specification

# NQO1 (isoform a) Antibody (internal region) - Product Information

Application Primary Accession Other Accession Reactivity Predicted Host Clonality Concentration Isotype Calculated MW WB <u>P15559</u> <u>NP\_000894.1</u>, <u>1728</u> Human Pig, Dog Goat Polyclonal 0.5 mg/ml IgG **30868** 

### NQO1 (isoform a) Antibody (internal region) - 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, DIA4, NMOR1

#### Format

0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin

#### Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

#### **Precautions**

NQO1 (isoform a) Antibody (internal region) is for research use only and not for use in diagnostic or therapeutic procedures.

# NQO1 (isoform a) Antibody (internal region) - 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:<a href="http://www.uniprot.org/citations/8999809">http://www.uniprot.org/citations/8999809</a>"



target="\_blank">8999809</a>, PubMed:<a href="http://www.uniprot.org/citations/9271353" target="\_blank">9271353</a>). 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:<a href="http://www.uniprot.org/citations/15102952" target="\_blank">15102952</a>, PubMed:<a href="http://www.uniprot.org/citations/15102952" target="\_blank">8999809</a>, PubMed:<a href="http://www.uniprot.org/citations/9271353" target="\_blank">9271353</a>). Alternatively, can activate quinones and their derivatives by generating redox reactive hydroquinones with DNA cross-linking antitumor potential (PubMed:<a href="http://www.uniprot.org/citations/8999809" target="\_blank">8999809</a>). 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:<a href="http://www.uniprot.org/citations/15687255" target="\_blank">15687255</a>. PubMed:<a

href="http://www.uniprot.org/citations/15687255" target="\_blank">15687255</a>, PubMed:<a href="http://www.uniprot.org/citations/28291250" target="\_blank">28291250</a>).

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

# NQO1 (isoform a) Antibody (internal region) - Protocols

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

- <u>Western Blot</u>
- Blocking Peptides
- <u>Dot Blot</u>
- <u>Immunohistochemistry</u>
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- <u>Cell Culture</u>

NQO1 (isoform a) Antibody (internal region) - Images



AF3483a (0.3  $\mu$ g/ml) staining of Human Kidney lysate (35  $\mu$ g protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.



# NQO1 (isoform a) Antibody (internal region) - Background

This antibody is expected to recognize reported isoform a (NP\_000894.1) only.

### NQO1 (isoform a) Antibody (internal region) - References

NQO1 stabilizes p53 through a distinct pathway. Asher G, Lotem J, Kama R, Sachs L, Shaul Y, Proceedings of the National Academy of Sciences of the United States of America 2002 Mar 99 (5): 3099-104. PMID: 11867746