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Anti-NQO1 Picoband Antibody

Catalog # ABO12185

Product Information

Application	WB
Primary Accession	P15559
Host	Rabbit
Reactivity	Human, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for NAD(P)H dehydrogenase [quinone] 1(NQO1) detection. Tested with WB in Human;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

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
Calculated MW	30868
Application Details	Western blot, 0.1-0.5 □g/ml, Human, Rat
Subcellular Localization	Cytoplasm.
Source	Eukaryota
Protein Name	NAD(P)H dehydrogenase [quinone] 1
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human NQO1 (242-274aa EVQDEEKNKKFGLSVGHHLGKSIPTDNQIKARK), different from the related mouse and rat sequences by five amino acids.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins
Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.
Sequence Similarities	Belongs to the NAD(P)H dehydrogenase (quinone) family.

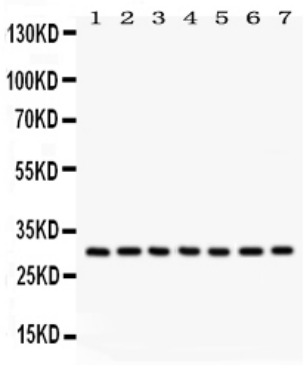
Protein Information

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}

Background

This gene is a member of the NAD(P)H dehydrogenase (quinone) family and encodes a cytoplasmic 2-electron reductase. And this FAD-binding protein forms homodimers and reduces quinones to hydroquinones. In addition, this protein's enzymatic activity prevents the one electron reduction of quinones that results in the production of radical species. Mutations in this gene have been associated with tardive dyskinesia (TD), an increased risk of hematotoxicity after exposure to benzene, and susceptibility to various forms of cancer. Altered expression of this protein has been seen in many tumors and is also associated with Alzheimer's disease (AD). Alternate transcriptional splice variants, encoding different isoforms, have been characterized.

Images



Anti- NQO1 Picoband antibody, ABO12185, Western blottingAll lanes: Anti NQO1 (ABO12185) at 0.5ug/mlLane 1: Rat Liver Tissue Lysate at 50ugLane 2: Rat Lung Tissue Lysate at 50ugLane 3: HELA Whole Cell Lysate at 40ugLane 4: A549 Whole Cell Lysate at 40ugLane 5: MM231 Whole Cell Lysate at 40ugLane 6: SW620 Whole Cell Lysate at 40ugLane 7: 22RV1 Whole Cell Lysate at 40ugPredicted bind size: 31KDObserved bind size: 31KD

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