abcam

ab250309

Anti-NQO2 antibody [EPR13345] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR13345
Purification technique	Affinity purification

Reactivity data

WB

Tested

Species	Mouse
Dilution info	-
Notes	-

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Rat
Dilution info	-
Notes	-

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Human
Dilution info	-
Notes	-

Target data

See full target information NQO2

Function The enzyme apparently serves as a quinone reductase in connection with conjugation reactions of hydroquinones involved in detoxification pathways as

well as in biosynthetic processes such as the vitamin K-dependent gamma-carboxylation of glutamate residues in prothrombin synthesis.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab250309 is the carrier-free version of ab181049.

Patented technology

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?

This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	NQO2 also known as NRH:quinone oxidoreductase 2 is a flavoprotein enzyme playing roles in cellular redox reactions. It has a molecular mass of approximately 25 kDa. NQO2 is expressed widely in human tissues such as liver colon and brain. It catalyzes the two-electron reduction of quinones to hydroquinones therefore helping prevent oxidative stress by converting reactive quinone species into less reactive and more stable molecules. The protein often interacts with other cellular components to perform its functions effectively.
Biological function summary	NQO2 participates in detoxification processes and acts as a dihydronicotinamide riboside:quinone oxidoreductase. Although it is not part of a large protein complex NQO2 may associate with other molecules or enzymes that modulate cellular antioxidant defense systems. It serves as a backup system when other primary antioxidant enzymes such as NQO1 are impaired. This function reflects the importance of NQO2 in maintaining cellular health and response to environmental stresses.
Pathways	NQO2 is involved in metabolism and oxidative stress response pathways. Its role in quinone detoxification connects it to the cellular defense mechanism against oxidative damage interacting with proteins like NQO1. NQO2's enzymatic activity goes hand-in-hand with the NAD(P)H dehydrogenase (quinone) pathway which collaborates with other proteins to maintain redox homeostasis and protect cells against electrophilic and oxidative stress.
Associated diseases and disorders	Alterations in NQO2 expression or function are linked to cancer and neurodegenerative diseases. NQO2's involvement in detoxifying potent quinones links it to cancerous developments when these processes fail while its role against oxidative stress connects it to neurodegenerative conditions like Parkinson’s disease. During these conditions interactions with proteins such as NQO1 and p53 can be significant. The balance of NQO2 activity may contribute to disease progression or suppression highlighting its therapeutic potential in disease management.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

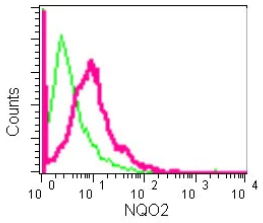
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

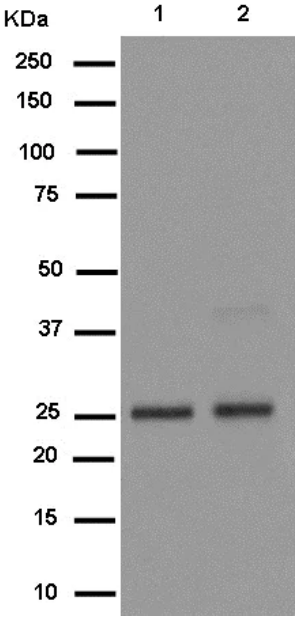
3 product images



Flow Cytometry (Intracellular) - Anti-NQO2 antibody [EPR13345] - BSA and Azide free (ab250309)

NQO2 Flow Cytometry (Intracellular) staining using rabbit Anti-NQO2 antibody

This data was developed using ab181049, the same antibody clone in a different buffer formulation.
Intracellular flow cytometric analysis of C6 cells labeling NQO2 with ab181049 at 1/140 dilution (red). Goat anti rabbit IgG (FITC) used as the secondary at 1/150 dilution. Isotype control Rabbit monoclonal IgG (green). Cells were fixed in 2% paraformaldehyde.



Western blot - Anti-NQO2 antibody [EPR13345] - BSA and Azide free (ab250309)

NQO2 Western blot staining using rabbit Anti-NQO2 antibody

This data was developed using ab181049, the same antibody clone in a different buffer formulation.
Blocking and dilution buffer: 5% NFDM/TBST.

All lanes:
Western blot - Anti-NQO2 antibody [EPR13345] (ab181049) at 1/5000 dilution

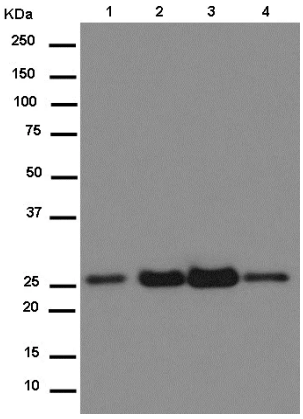
Lane 1:
L6 cell lysate at 10 µg

Lane 2:
C2C12 cell lysate at 10 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 26 kDa



Western blot - Anti-NQO2 antibody [EPR13345] - BSA and Azide free (ab250309)

This data was developed using ab181049, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-NQO2 antibody [EPR13345] (ab181049) at 1/1000 dilution

Lane 1:
Mouse kidney tissue lysate at 20 µg

Lane 2:
Rat heart tissue lysate at 20 µg

Lane 3:
Rat kidney tissue lysate at 20 µg

Lane 4:
Rat spleen tissue lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 26 kDa

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