abcam

ab249663

Anti-QPRT antibody [EPR11941(B)] - BSA and Azide free

Recombinant | RabMAb | KO Validated

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	EPR11941(B)
Purification technique	Affinity purification
Concentration	1.014 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	-

Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

IHC

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information Nicotinate-nucleotide pyrophosphorylase [carboxylating]

Function	Involved in the catabolism of quinolinic acid (QA).

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

ab249663 is the carrier-free version of ab171944.

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	QPRT also known as Nicotinate-nucleotide pyrophosphorylase [carboxylating] or Quinolinate phosphoribosyltransferase functions as an important enzyme in the kynurenine pathway a metabolic pathway leading to the production of nicotinamide adenine dinucleotide (NAD+). The enzyme catalyzes the conversion of quinolinate to nicotinic acid mononucleotide. QPRT has a molecular mass of approximately 34 kDa. It is expressed in various tissues most notably in the liver kidney and brain.
Biological function summary	QPRT influences the synthesis of NAD+ which is essential for cellular redox reactions and energy metabolism. The enzyme operates as a monomer and does not typically form part of a larger complex. However its activity is important in maintaining NAD+ levels which can impact a wide range of cellular processes such as DNA repair signal transduction and metabolism.
Pathways	QPRT holds a significant role in the kynurenine pathway and NAD+ biosynthesis. This pathway includes several enzymes such as kynurenine 3-monooxygenase and kynureninase which collaboratively contribute to the degradation of tryptophan ultimately affecting the levels of important coenzymes and neurotransmitters. The NAD+ biosynthesis pathway involving QPRT also interacts with pathways for ATP generation connecting with other metabolic processes.
Associated diseases and disorders	QPRT's malfunction links to neurological disorders such as Alzheimer's disease due to its role in NAD+ metabolism and potential effects on neuronal health and energy supply. Additionally alterations in QPRT activity have associations with liver diseases considering its expression and function in metabolic pathways within hepatic tissues. Interaction with proteins like kynurenine aminotransferase highlights its involvement in maintaining metabolic balance within these conditions.

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

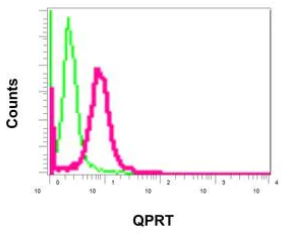
We do not recommend this combination. It is not covered by our product promise.

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.

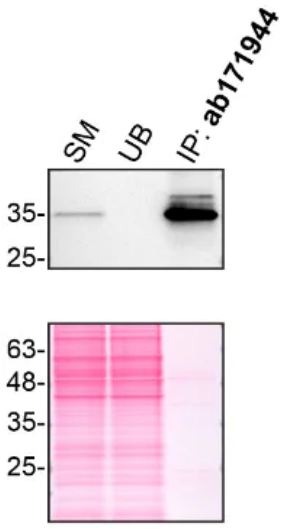
5 product images



Flow Cytometry (Intracellular) - Anti-QPRT antibody [EPR11941(B)] - BSA and Azide free (ab249663)

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

This data was developed using ab171944, the same antibody clone in a different buffer formulation.
Intracellular flow cytometric analysis of permeabilized Jurkat cells labeling QPRT with ab171944 at 1/10 (red) or a rabbit IgG (negative) (green).



Immunoprecipitation - Anti-QPRT antibody [EPR11941(B)] - BSA and Azide free (ab249663)

This data was developed using the same antibody clone in a different buffer formulation (ab171944)

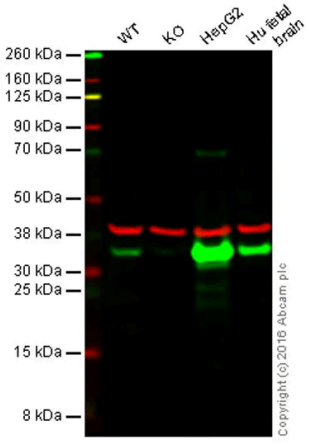
Immunoprecipitation of QPRT in HAP1 cells. Lysates were prepared and immunoprecipitation was performed using 2.0 µg of ab171944 pre-coupled to Protein A beads. Samples were washed and processed for western blot with ab171944 at 1/1000

This data was provided by YCharOS Inc., an open science company with the mission of characterizing commercially available antibody reagents for all human proteins. Abcam and YCharOS are working together to help address the reproducibility crisis by enabling the life science community to better evaluate commercially available antibodies.
Lane 1:
Immunoprecipitation - Anti-QPRT antibody [EPR11941(B)] (ab171944) at 1/1000 dilution

Lane 3:
Immunoprecipitation - Anti-QPRT antibody [EPR11941(B)] (ab171944) at 2 µg

All lanes:
HAP1 cells

Observed band size: 31 kDa



Western blot - Anti-QPRT antibody [EPR11941(B)] - BSA and Azide free (ab249663)

QPRT Western blot staining using rabbit Anti-QPRT antibody

This data was developed using ab171944, the same antibody clone in a different buffer formulation.
Lane 1 Wild-type HAP1 cell lysate (20 µg)

Lane 2 QPRT knockout HAP1 cell lysate (20 µg)

Lane 3 HepG2 cell lysate (20 µg)

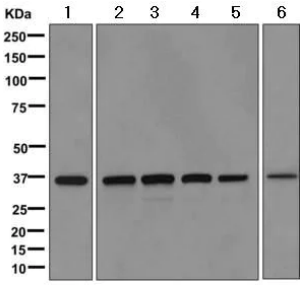
Lane 4 Human fetal brain cell lysate (20 µg)

Lanes 1 - 4 Merged signal (red and green). Green - ab171944 observed at 35 kDa. Red - loading control, ab8245, observed at 37 kDa.

ab171944 was shown to specifically react with QPRT when QPRT knockout samples were used. Wild-type and QPRT knockout samples were subjected to SDS-PAGE. ab171944 and ab8245 (loading control to GAPDH) were diluted 1/1000 and 1/10 000 respectively and incubated overnight at 4°C. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed ab216773 and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed ab216776 secondary antibodies at 1/10 000 dilution for 1 h at room temperature before imaging.

All lanes:
Western blot - Anti-QPRT antibody [EPR11941(B)] (ab171944)

Predicted band size: 31 kDa



Western blot - Anti-QPRT antibody [EPR11941(B)] - BSA and Azide free (ab249663)

This data was developed using ab171944, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-QPRT antibody [EPR11941(B)] (ab171944) at 1/1000 dilution

Lane 1:
Human fetal kidney tissue lysate at 10 µg

Lane 2:
Human fetal liver tissue lysate at 10 µg

Lane 3:
HepG2 cell lysate at 10 µg

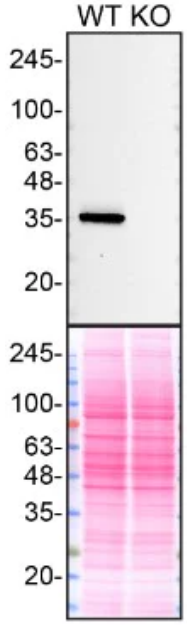
Lane 4:
HeLa cell lysate at 10 µg

Lane 5:
Jurkat cell lysate at 10 µg

Lane 6:
Human fetal heart tissue lysate at 10 µg

Developed using the ECL technique.

Predicted band size: 31 kDa



Western blot - Anti-QPRT antibody [EPR11941(B)] - BSA and Azide free (ab249663)

This data was developed using the same antibody clone in a different buffer formulation (ab171944)

ab171944 was shown to react with QPRT in wild-type HAP1 cells in Western blot with loss of signal observed in a QPRT knockout cell line. Wild-type HAP1 and QPRT knockout cell lysates were subjected to SDS-PAGE. Membranes were blocked in 5% milk in TBST for 1 hr before incubation with ab171944 overnight at 4 °C at a 1/500 dilution. Blots were incubated with secondary antibodies at 0.2ug/mL before imaging.

This data was provided by YCharOS Inc., an open science company with the mission of characterizing commercially available antibody reagents for all human proteins. Abcam and YCharOS are working together to help address the reproducibility crisis by enabling the life science community to better evaluate commercially available antibodies.
All lanes:
Western blot - Anti-QPRT antibody [EPR11941(B)] (ab171944) at 1/500 dilution

Lane 1:
Wild-type HAP1 lysate at 20 µg

Lane 2:
QPRT knock-out HAP1 lysate at 20 µg

Predicted band size: 31 kDa

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