abcam

ab137112

Anti-IMPDH2 + IMPDH1 antibody [EPR9679(B)]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR9679(B)
Purification technique	Affinity purification Protein A

Reactivity data

IP

Not recommended

Species	Human
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000 - 1/10000
Notes	-

IHC-P

Not recommended

Species	Human
Dilution info	-
Notes	-

ICC/IF

Not recommended

Species	Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/100 - 1/500
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Target data

See full target information IMPDH1

Function	Catalyzes the conversion of inosine 5'-phosphate (IMP) to xanthosine 5'-phosphate (XMP), the first committed and rate-limiting step in the de novo synthesis of guanine nucleotides, and therefore plays an important role in the regulation of cell growth. Could also have a single-stranded nucleic acid-binding activity and could play a role in RNA and/or DNA metabolism. It may also have a role in the development of malignancy and the growth progression of some tumors.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C

Notes

Species reactivity
Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

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.

Supplementary info

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

Activity summary	The proteins IMPDH2 and IMPDH1 also known as inosine-5'-monophosphate dehydrogenase 2 and 1 are enzymes involved in purine metabolism. IMPDH1 has a mass of approximately 55 kDa while IMPDH2 measures around 56 kDa. Both proteins catalyze the conversion of inosine monophosphate (IMP) to xanthosine monophosphate (XMP) an essential step in the de novo synthesis of guanine nucleotides. They are expressed in various tissues with highest levels found in blood and immune system cells reflecting their important role in cell proliferation.
Biological function summary	These enzymes perform critical functions by facilitating the synthesis of guanine nucleotides which are building blocks of DNA and RNA. IMPDH1 and IMPDH2 do not function within large multimeric complexes but exhibit regulatory roles over cellular proliferation and differentiation. The balance between these enzymes impacts the overall guanine nucleotide pool affecting cellular processes such as growth and division.

Pathways	These enzymes link to nucleotide biosynthesis pathways particularly the guanine nucleotide synthesis pathway. This pathway integrates with the purine metabolism network. IMPDH proteins interact with key enzymes like GMP synthase which directly follows IMPDHs in nucleotide synthesis. Their activity regulates cell proliferative capacity making them integral to processes like DNA replication and repair.
Associated diseases and disorders	The proteins play significant roles in conditions like cancer and retinitis pigmentosa. IMPDH2 is often overexpressed in rapidly proliferating cancer cells linking it to tumor growth and progression. Meanwhile mutations in IMPDH1 have associations with retinitis pigmentosa a genetic disorder causing retinal degeneration. These enzymes' dysfunction relates to proteins they interact with in these diseases such as DNA repair proteins in cancer and photoreceptor proteins in retinal disorders.

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

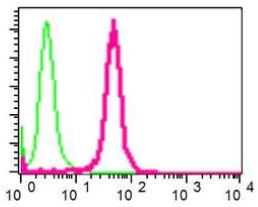
We do not recommend this combination. It is not covered by our product promise.

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.

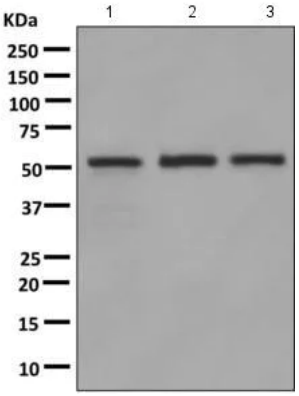
3 product images



Flow Cytometry (Intracellular) - Anti-IMPDH2 + IMPDH1 antibody [EPR9679(B)] (ab137112)

IMPDH2 + IMPDH1 Flow Cytometry (Intracellular) staining using rabbit Anti-IMPDH2 + IMPDH1 antibody

Intracellular flow cytometric analysis of permeabilized K562 cells labelling IMPDH1 with ab137112 (red) at 1/500 dilution or a rabbit IgG (negative) (green).



Western blot - Anti-IMPDH2 + IMPDH1 antibody [EPR9679(B)] (ab137112)

IMPDH2 + IMPDH1 Western blot staining using rabbit Anti-IMPDH2 + IMPDH1 antibody

All lanes:
Western blot - Anti-IMPDH2 + IMPDH1 antibody [EPR9679(B)] (ab137112) at 1/1000 dilution

Lane 1:
HeLa cell lysate at 10 µg

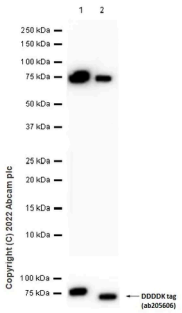
Lane 2:
Jurkat cell lysate at 10 µg

Lane 3:
K562 cell lysate at 10 µg

Secondary

All lanes:
Standard HRP-labeled goat anti-rabbit at 1/2000 dilution

Developed using the ECL technique.



Western blot - Anti-IMPDH2 + IMPDH1 antibody [EPR9679(B)] (ab137112)

Blocking buffer and concentration: 5% NFDM/TBST. Diluting buffer and concentration: 5% NFDM /TBST.
All lanes:
Western blot - Anti-IMPDH2 + IMPDH1 antibody [EPR9679(B)] (ab137112) at 1/1000 dilution

Lane 1:
C-Myc/DDK tagged full length IMPDH1 Human Recombinant Protein

Lane 2:
C-Myc/DDK tagged full length IMPDH2 Human Recombinant Protein

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 55 kDa

Observed band size: 75 kDa

Exposure time: 20s

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