abcam

ab249123

Anti-UGPase antibody [EPR10627(B)] - 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	EPR10627(B)
Purification technique	Affinity purification
Concentration	0.999 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	-

Notes	-

Expected

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

Predicted

Species	Rat, Pig
Dilution info	-
Notes	-

IP

Not recommended

Species	Mouse, Human, Rat, Pig
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Predicted

Species	Rat, Pig
Dilution info	-
Notes	-

ICC/IF

Not recommended

Species	Mouse, Human, Rat, Pig
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	-
Notes	-

Expected

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

Predicted

Species	Rat, Pig
Dilution info	-
Notes	-

Target data

See full target information UGP2

Function	UTP--glucose-1-phosphate uridylyltransferase catalyzing the conversion of glucose-1-phosphate into UDP-glucose, a crucial precursor for the production of glycogen.

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

ab249123 is the carrier-free version of ab154817.

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	UGPase also known as UDP-glucose pyrophosphorylase plays an important role in carbohydrate metabolism by catalyzing the reversible formation of UDP-glucose and pyrophosphate from glucose-1-phosphate and UTP. The enzyme has a mass of about 52 kDa. UGPase is expressed in many tissues but especially in liver muscle and brain where carbohydrate metabolism is highly active. Its presence ensures the availability of UDP-glucose which serves as a glycosyl donor in the synthesis of glycogen.
Biological function summary	UGPase provides UDP-glucose a central metabolite in carbohydrate biosynthesis. It does not function as part of a complex but independently supports various biosynthetic pathways. UDP-glucose acts as a precursor not only for glycogen but also for glycoproteins glycolipids and proteoglycans. UGPase activity is critical for maintaining glucose homeostasis and its regulation directly affects carbohydrate allocation and storage.
Pathways	UGPase operates in the glycogen synthesis pathway and the pentose phosphate pathway. In the glycogen synthesis pathway UGPase works closely with glycogen synthase which converts UDP-glucose into glycogen helping in energy storage. In the pentose phosphate pathway UDP-glucose serves as a substrate for enzymes modifying carbohydrate structures. These pathway interactions place UGPase as an essential node linking carbohydrate metabolism routes.
Associated diseases and disorders	The dysregulation of UGPase affects disorders like glycogen storage diseases and diabetes. An abnormal UGPase activity can lead to inefficient glycogen storage impacting energy balance and contributing to these conditions. The enzyme also connects with proteins like glycogen synthase in glycogen storage diseases illustrating how alterations in its function can disturb glycogen synthesis and storage. Understanding UGPase activity therefore offers insights into metabolic imbalances seen in these diseases.

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

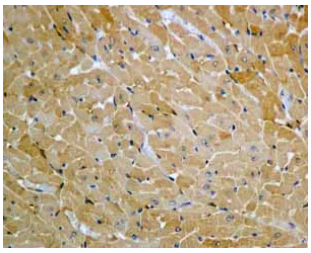
We do not recommend this combination. It is not covered by our product promise.

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.

8 product images

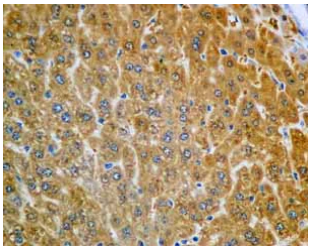


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-UGPase antibody [EPR10627(B)] - BSA and Azide free (ab249123)

UGPase Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-UGPase antibody

This data was developed using ab154817, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin embedded Human normal heart tissue using ab154817 showing +ve staining.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

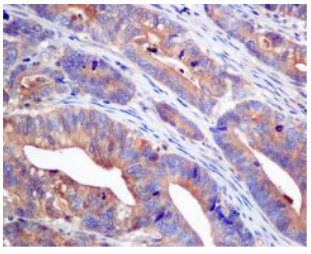


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-UGPase antibody [EPR10627(B)] - BSA and Azide free (ab249123)

UGPase Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-UGPase antibody

This data was developed using ab154817, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin embedded Human normal liver tissue using ab154817 showing +ve staining.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



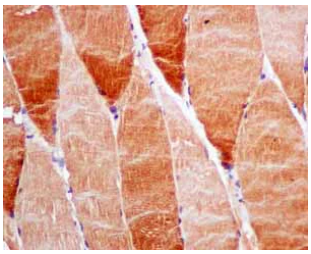
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-UGPase antibody [EPR10627(B)] - BSA and Azide free (ab249123)

UGPase Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-UGPase antibody

This data was developed using ab154817, the same antibody clone in a different buffer formulation.

Immunohistochemical analysis of paraffin-embedded Human colon adenocarcinoma labeling UGPase using ab154817 at 1/50 dilution.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

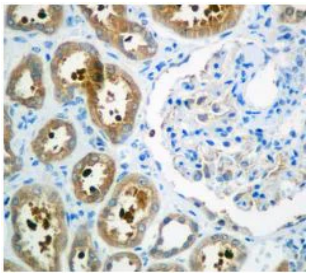


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-UGPase antibody [EPR10627(B)] - BSA and Azide free (ab249123)

UGPase Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-UGPase antibody

This data was developed using ab154817, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin embedded Human skeletal muscle tissue using ab154817 showing +ve staining.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

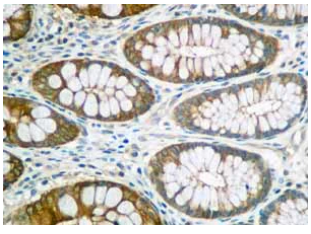


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-UGPase antibody [EPR10627(B)] - BSA and Azide free (ab249123)

UGPase Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-UGPase antibody

This data was developed using ab154817, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Human kidney labeling UGPase using ab154817 at 1/50 dilution.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

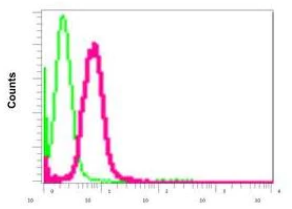


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-UGPase antibody [EPR10627(B)] - BSA and Azide free (ab249123)

UGPase Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-UGPase antibody

This data was developed using ab154817, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin embedded Human normal colon tissue using ab154817 showing +ve staining.

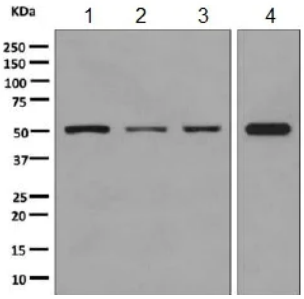
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-UGPase antibody [EPR10627(B)] - BSA and Azide free (ab249123)

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

This data was developed using ab154817, the same antibody clone in a different buffer formulation.
Intracellular flow cytometric analysis of permeabilized NIH 3T3 cells labeling UGPase using ab154817 (red) at 1/10 dilution or a rabbit IgG (negative) (green).



Western blot - Anti-UGPase antibody [EPR10627(B)] - BSA and Azide free (ab249123)

UGPase Western blot staining using rabbit Anti-UGPase antibody

This data was developed using ab154817, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-UGPase antibody [EPR10627(B)] (ab154817) at 1/1000 dilution

Lane 1:
HepG2 cell lysate at 10 µg

Lane 2:
HeLa cell lysate at 10 µg

Lane 3:
NIH 3T3 cell lysate at 10 µg

Lane 4:
Human fetal liver tissue lysate at 10 µg

Predicted band size: 57 kDa

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