abcam

ab157473

Anti-UGPase antibody [EPR10626]

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	EPR10626
Purification technique	Affinity purification Protein A
Concentration	0.188 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/250 - 1/500
Notes	-

WB

Tested

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

ICC/IF

Tested

Species	Human
Dilution info	1/250 - 1/500
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/10 - 1/100
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

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	Conditional Ambient
Appropriate short-term storage conditions	+4°C

Appropriate long-term storage conditions	-20°C

Notes

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	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

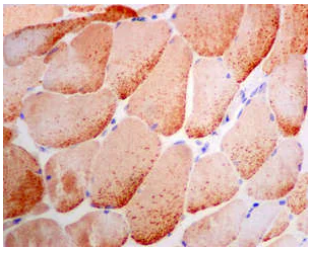
We do not recommend this combination. It is not covered by our product promise.

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.

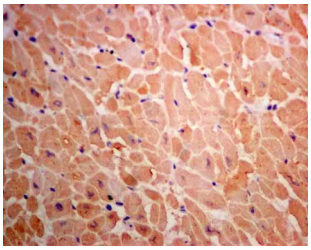
7 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-UGPase antibody [EPR10626] (ab157473)

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

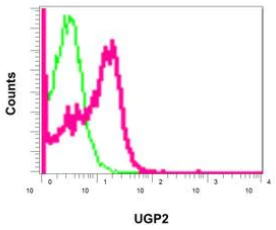
Immunohistochemical analysis of paraffin-embedded Human muscle tissue labeling UGPase with ab157473 at 1/250 dilution.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-UGPase antibody [EPR10626] (ab157473)

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

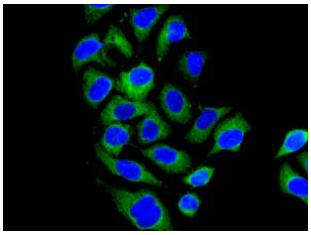
ab157473 showing +ve staining in Human heart.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-UGPase antibody [EPR10626] (ab157473)

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

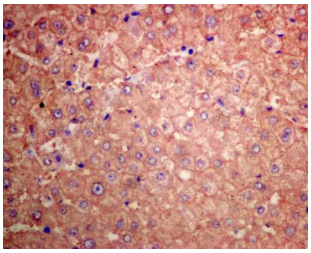
Intracellular flow cytometric analysis of permeabilized HeLa cells labeling UGPase with ab157473 at 1/10 dilution (red) compared to a rabbit IgG negative control (green).



Immunocytochemistry/ Immunofluorescence - Anti-UGPase antibody [EPR10626] (ab157473)

UGPase Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-UGPase antibody

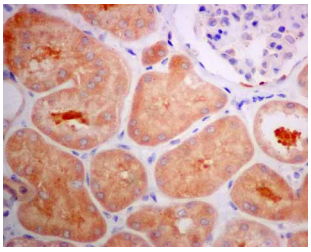
Immunofluorescent analysis of HeLa cells labeling UGPase with ab157473 at 1/250 dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-UGPase antibody [EPR10626] (ab157473)

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

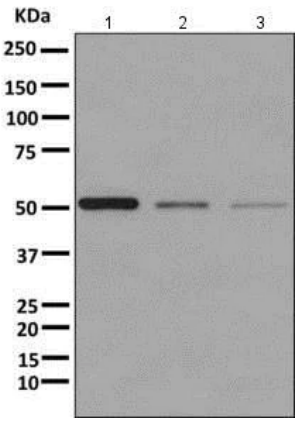
ab157473 showing +ve staining in Human normal liver.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-UGPase antibody [EPR10626] (ab157473)

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

ab157473 showing +ve staining in Human normal kidney.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Western blot - Anti-UGPase antibody [EPR10626] (ab157473)

UGPase Western blot staining using rabbit Anti-UGPase antibody

All lanes:
Western blot - Anti-UGPase antibody [EPR10626] (ab157473) at 1/1000 dilution

Lane 1:
Fetal liver lysate at 10 µg

Lane 2:
HepG2 cell lysate at 10 µg

Lane 3:
HeLa cell lysate at 10 µg

Secondary

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

Predicted band size: 57 kDa

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