abcam

ab261910

Anti-AGXT antibody [EPR22885-58]

Recombinant | RabMAb | KO Validated

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	EPR22885-58
Purification technique	Affinity purification Protein A
Specificity	This antibody is not recommended for rat IHC-fr.
Concentration	0.489 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Rat
Dilution info	1/1000
Notes	-

Species	Human
Dilution info	1/1000
Notes	-

ICC/IF

Not recommended

Species	Mouse, Human, Rat
Dilution info	-
Notes	-

IHC-Fr

Tested

Species	Mouse
Dilution info	1/100
Notes	Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20). This antibody is not recommended for rat IHC-fr. Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Expected

Species	Rat, Human

Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	1/50
Notes	-

Expected

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

IHC-P

Tested

Species	Mouse
Dilution info	1/1000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	1/1000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Human
Dilution info	1/1000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Target data

See full target information AGXT

Function	Peroxisomal aminotransferase that catalyzes the transamination of glyoxylate to glycine and contributes to the glyoxylate detoxification (PubMed:10960483, PubMed:12777626, PubMed:23229545, PubMed:24055001, PubMed:26149463). Also catalyzes the transamination between L-serine and pyruvate and contributes to gluconeogenesis from the L-serine metabolism (PubMed:10347152).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

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	The biological target AGXT also known as alanine-glyoxylate aminotransferase plays an important role in human metabolism. It is a liver-specific enzyme with an approximate molecular weight of 43 kDa. AGXT is expressed primarily in liver

	peroxisomes where it catalyzes the transamination reaction that converts glyoxylate to glycine. This enzymatic activity is important for detoxifying glyoxylate which otherwise could accumulate and result in harmful effects. The expression level and activity of AGXT can be influenced by various metabolic conditions.
Biological function summary	The conversion of glyoxylate to glycine mediated by AGXT helps in maintaining cellular homeostasis. AGXT is not part of large protein complexes but it directly influences the pathways leading to amino acid metabolism. By converting glyoxylate into glycine this enzyme plays a part in managing the precursors necessary for the biosynthesis of other important biomolecules including serine and pyruvate. As glyoxylate is an important intermediary its conversion is essential for metabolic flux.
Pathways	AGXT has a significant role in the glyoxylate metabolic pathway and the glycine serine and threonine metabolism pathway. In these pathways it works closely with other enzymes like glycine decarboxylase and serine hydroxymethyltransferase. The proper functioning of these pathways ensures efficient energy utilization and detoxification in the human body. Any disruption can affect the balance of amino acid concentrations leading to metabolic disturbances.
Associated diseases and disorders	AGXT is most prominently linked to primary hyperoxaluria type 1 (PH1) which is a rare genetic condition. In PH1 mutations in the AGXT gene lead to its dysfunctional enzyme causing the accumulation of oxalate and subsequent kidney stone formation and renal failure. The disease connection places AGXT in relation to key proteins involved in oxalate metabolism and renal function such as glycolate oxidase. Understanding AGXT's role in these disorders opens pathways for therapeutic interventions and advanced research into metabolic regulation.

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

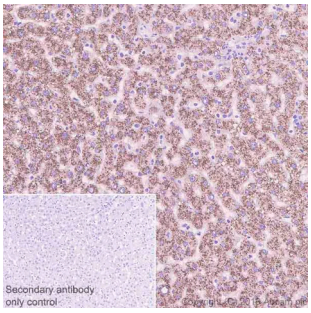
We do not recommend this combination. It is not covered by our product promise.

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

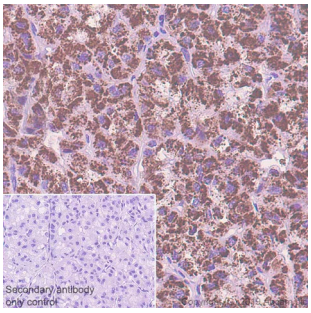


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-AGXT antibody [EPR22885-58] (ab261910)

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

Immunohistochemical analysis of paraffin-embedded Human liver tissue labeling AGXT with ab261910 at 1/ 1000 dilution (0.502ug/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Positive staining in human liver (PMID: 29883780) is observed. The section was incubated with ab261910 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20 mins.

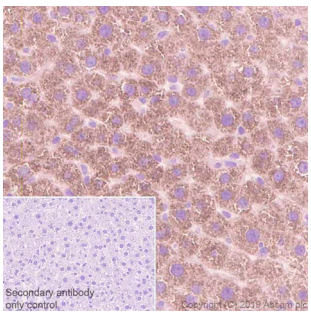


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-AGXT antibody [EPR22885-58] (ab261910)

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

Immunohistochemical analysis of paraffin-embedded Human liver cancer tissue labeling AGXT with ab261910 at 1/ 1000 dilution (0.502ug/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Positive staining in human liver cancer (PMID: 29883780) is observed. The section was incubated with ab261910 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.
Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20 mins.



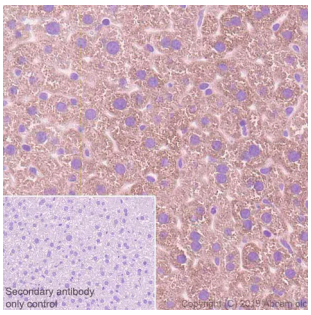
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-AGXT antibody [EPR22885-58] (ab261910)

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

Immunohistochemical analysis of paraffin-embedded rat liver tissue labeling AGXT with ab261910 at 1/1000 dilution (0.502ug/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Positive staining in rat liver (PMID: 29883780) is observed. The section was incubated with ab261910 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20 mins.

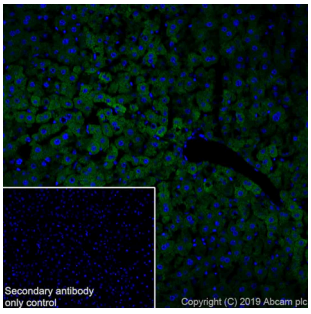


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-AGXT antibody [EPR22885-58] (ab261910)

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

Immunohistochemical analysis of paraffin-embedded Mouse liver tissue labeling AGXT with ab261910 at 1/ 1000 dilution (0.502ug/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Positive staining in mouse liver (PMID: 29883780) is observed. The section was incubated with ab261910 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

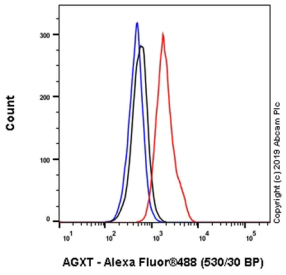
Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20 mins.



Immunohistochemistry (Frozen sections) - Anti-AGXT antibody [EPR22885-58] (ab261910)

AGXT Immunohistochemistry (Frozen sections) staining using rabbit Anti-AGXT antibody

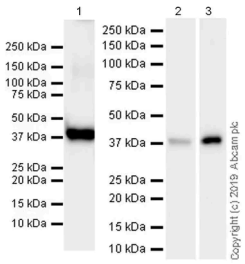
Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen section of mouse liver tissue labeling AGXT with ab261910 at 1/100 dilution, followed by ab150077 AlexaFluor®488 Goat anti-Rabbit secondary at 1/1000 dilution (green). The nuclear counter stain is DAPI (blue). Positive staining on mouse liver (PMID: 29883780).
Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20).



Flow Cytometry (Intracellular) - Anti-AGXT antibody [EPR22885-58] (ab261910)

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

Intracellular flow cytometric analysis of 4% paraformaldehyde fixed, 90% methanol permeabilized Hepa1-6 (mouse hepatoma epithelial cell) cells labelling AGXT with ab261910 at 1/50 dilution (Red) compared with a Rabbit monoclonal IgG (ab172730) / Black isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as the secondary antibody.



Western blot - Anti-AGXT antibody [EPR22885-58] (ab261910)

AGXT Western blot staining using rabbit Anti-AGXT antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST The expression profile observed is consistent with what has been described in the literature (PMID: 16309382).
Exposure time: Lanes 1/2: 1 second; Lane 3: 59 seconds.

All lanes:
Western blot - Anti-AGXT antibody [EPR22885-58] (ab261910) at 1/1000 dilution

Lane 1:
Human liver tissue lysate at 20 µg

Lane 2:
Mouse liver tissue lysate at 20 µg

Lane 3:
Rat liver tissue lysate at 20 µg

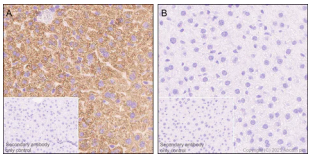
Secondary

Lane 1:
Western blot - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/250 dilution

Lanes 2 - 3:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 43 kDa

Observed band size: 43 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-AGXT antibody [EPR22885-58] (ab261910)

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

Immunohistochemical analysis of paraffin-embedded mouse liver tissue labeling AGXT with ab261910 at 1/ 1000 dilution followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Positive staining on (A) Liver tissue from wild-type C57BL/6J mice, no staining on (B) Liver tissue from Agxt knockout mice. The primary antibody was incubated for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.
Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20 mins.

The tissue samples were kindly provided by GemPharmatech. C57BL/6JGpt wildtype mice and Agxt-KO homozygous mice (Strain ID: T030354).

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