

HAO1 Mouse mAb
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Catalog # AP94096**Specification**

HAO1 Mouse mAb - Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	O9WU19
Reactivity	Mouse
Host	Rabbit
Clonality	Monoclonal
Calculated MW	41 KDa
Physical State	Liquid
Immunogen	Recombinant mouse HAO1 Protein
Epitope Specificity	full length
Isotype	IgG
Purity	
affinity purified by Protein G	
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Peroxisome.
SIMILARITY	Belongs to the FMN-dependent alpha-hydroxy acid dehydrogenase family. Contains 1 FMN hydroxy acid dehydrogenase domain.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

Background Descriptions

GOX is a 370 amino acid protein that is expressed in liver and pancreas. HAO1 is localized to peroxisomes and aids in organic acid metabolism via 2-hydroxyacid oxidase activity. 2-hydroxyacid oxidases, such as HAO1, are enzymes that require a flavin cofactor to oxidize 2-hydroxyacids to 2-ketoacids while reducing oxygen to hydrogen peroxide. HAO1 preferentially oxidizes the substrate glycolate and also oxidizes other substrates, including 2-hydroxy fatty acids as well as L-?hydroxy acids of moderately short chain lengths. The oxidation of glycolate yields glyoxylate which is utilized for peroxisomal synthesis of glycine. HAO1 is also able to convert glyoxylate to oxalate. HAO1 is thought to play a role in the pathophysiology of hyperoxaluria type 1, which is caused by defects in AGXT, a peroxisomal enzyme, leading to accumulation of glyoxylate. Hyperoxaluria type 1 is characterized by an accumulation of oxalate that is thought to lead to precipitates of calcium oxalate in kidneys which can be fatal.

HAO1 Mouse mAb - Additional Information**Gene ID** 15112**Other Names**

2-Hydroxyacid oxidase 1, HAOX1, 1.1.3.15, Glycolate oxidase, GOX, Glyoxylate oxidase, Hao1 {ECO:0000312|MGI:MGI:96011}

Target/Specificity

Liver.

Dilution

WB~1:1000
IHC-P~N/A
IHC-F~N/A
IF~1:50~200

Storage

Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

HAO1 Mouse mAb - Protein Information

Name Hao1 {ECO:0000312|MGI:MGI:96011}

Function

Broad substrate specificity (S)-2-hydroxy-acid oxidase that preferentially oxidizes glycolate (PubMed:9891009). The glyoxylate produced by the oxidation of glycolate can then be utilized by alanine- glyoxylate aminotransferase for the peroxisomal synthesis of glycine; this pathway appears to be an important step for the detoxification of glyoxylate which, if allowed to accumulate, may be metabolized to oxalate with formation of kidney stones (By similarity). Can also catalyze the oxidation glyoxylate, and long chain hydroxyacids such as 2-hydroxyhexadecanoate and 2-hydroxyoctanoate (By similarity). Active in vitro with the artificial electron acceptor 2,6-dichlorophenolindophenol (DCIP), but O₂ is believed to be the physiological electron acceptor, leading to the production of H₂O₂ (PubMed:9891009).

Cellular Location

Peroxisome matrix {ECO:0000250|UniProtKB:Q9UJM8}.

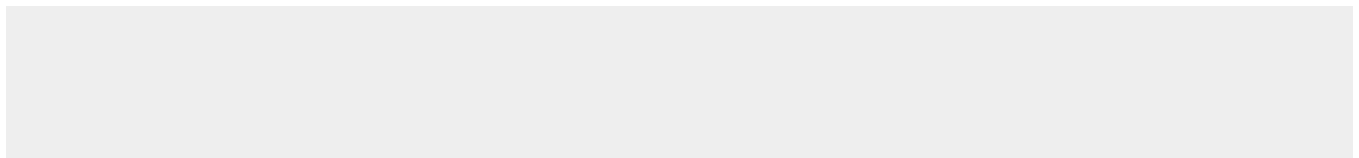
Tissue Location

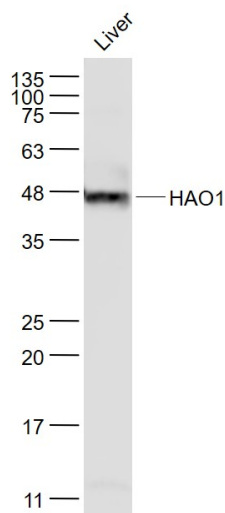
Liver..

HAO1 Mouse mAb - Protocols

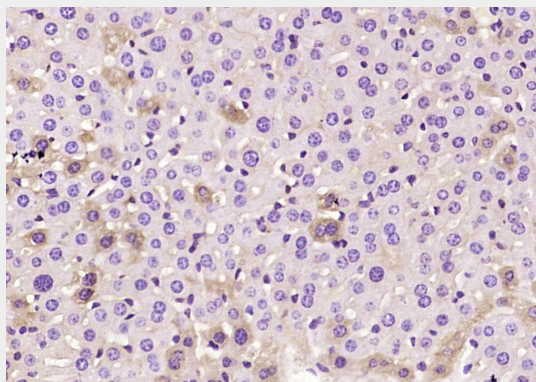
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

HAO1 Mouse mAb - Images



Sample: Liver(Rat) Lysate at 40 ug Primary: Anti- HAO1 (AP94096) at 1/1000 dilution Secondary: IRDye800CW Goat Anti-Mouse IgG at 1/20000 dilution Predicted band size: 41 kD Observed band size: 42 kD



Paraformaldehyde-fixed, paraffin embedded (mouse liver tissue); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (HAO1) Monoclonal Antibody, Unconjugated (ascites of AP94096 Mix) at 1:2000 overnight at 4°C, followed by a conjugated secondary (sp-0024) for 20 minutes and DAB staining.

HAO1 Mouse mAb - Background

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