

## Product datasheet

# Anti-Glutathione Peroxidase 1 antibody ab22604

敲除 验证

★★★★★ 23 Abreviews 60 References 6 图像

### 概述

产品名称	Anti-Glutathione Peroxidase 1 抗体
描述	兔多克隆抗体 to Glutathione Peroxidase 1
宿主	Rabbit
经测试应用	适用于: IHC-P, WB, ICC/IF, IHC-Fr
种属反应性	与反应: Mouse, Rat, Cow, Human
免疫原	Synthetic peptide conjugated to KLH derived from within residues 150 to the C-terminus of Human Glutathione Peroxidase 1. 参阅Abcam的专有抗源政策 (Peptide available as <a href="#">ab25301</a> .)
阳性对照	This antibody gave a positive signal in Human, Rat and mouse liver tissue lysates.

### 性能

形式	Liquid
存放说明	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
存储溶液	Preservative: 0.02% Sodium Azide Constituents: 1% BSA, PBS, pH 7.4
纯度	Immunogen affinity purified
克隆	多克隆
同种型	IgG

### 应用

Our [Abpromise guarantee](#) covers the use of **ab22604** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

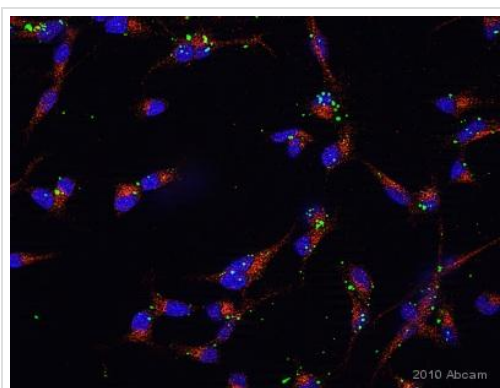
应用	Ab评论	说明
IHC-P	★★★★★	1/300 - 1/1000. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.
WB	★★★★☆	Use a concentration of 1 µg/ml. Detects a band of approximately 22 kDa (predicted molecular weight: 22 kDa).

应用	Ab评论	说明
ICC/IF	★★★★★	Use a concentration of 5 µg/ml.
IHC-Fr	★★★★★	Use at an assay dependent concentration.

## 靶标

功能	Protects the hemoglobin in erythrocytes from oxidative breakdown.
序列相似性	Belongs to the glutathione peroxidase family.
细胞定位	Cytoplasm.

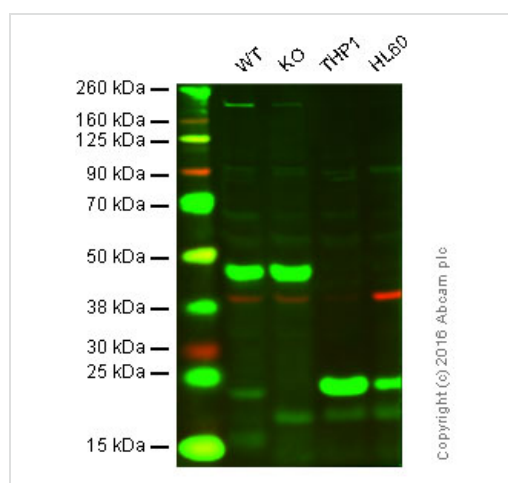
## 图片



Immunocytochemistry/ Immunofluorescence - Anti-Glutathione Peroxidase 1 antibody (ab22604)

This image is courtesy of an Abreview submitted by Carl Hobbs

ab22604 staining mouse Cor-1 cells by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with formaldehyde, permeabilized with TBS/BSA/azide/0.1%Tween 20 and blocked with 1% BSA for 10 minutes at RT. Samples were incubated with primary antibody (1/300) for 2 hours. An diluted (1/1000) Alexa Fluor® 594-conjugated Goat anti-rabbit IgG polyclonal was used as the secondary antibody.

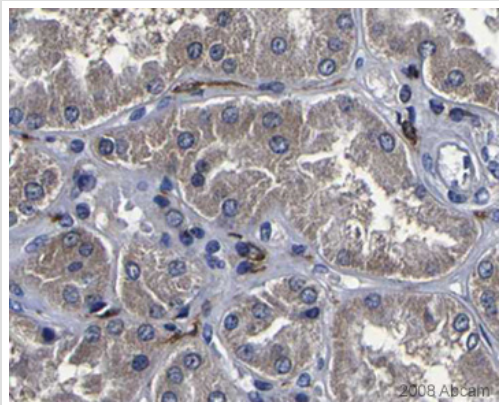


Western blot - Anti-Glutathione Peroxidase 1 antibody (ab22604)

**Lane 1:** Wild-type HAP1 cell lysate (20 µg)  
**Lane 2:** GPX1 knockout HAP1 cell lysate (20 µg)  
**Lane 3:** THP1 cell lysate (20 µg)  
**Lane 4:** HL60 cell lysate (20 µg)  
**Lanes 1 - 4:** Merged signal (red and green). Green - ab22604 observed at 24 kDa. Red - loading control, [ab8245](#), observed at 37 kDa.

ab22604 was shown to recognize Glutathione Peroxidase 1 in wild-type HAP1 cells along with additional cross-reactive bands. No band was observed when Glutathione Peroxidase 1 knockout samples were examined. Wild-type and Glutathione Peroxidase 1 knockout samples were subjected to SDS-PAGE. ab22604 at a concentration of 1 µg/ml and [ab8245](#) (loading control to GAPDH) diluted at 1/2000 were incubated overnight at 4°C. Blots were

developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed ([ab216773](#)) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed ([ab216776](#)) secondary antibodies at 1/10,000 dilution for 1 hour at room temperature before imaging.

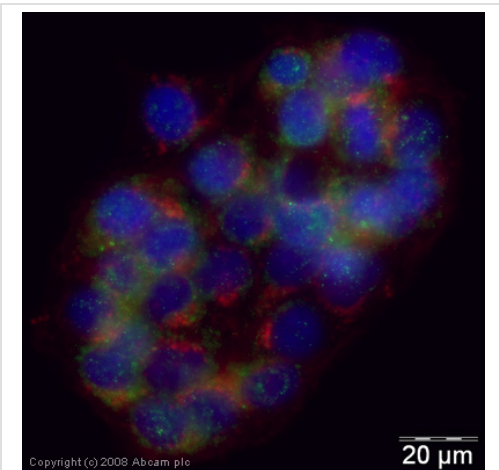


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Glutathione Peroxidase 1 antibody (ab22604)

Image courtesy of [Human Protein Atlas](#)

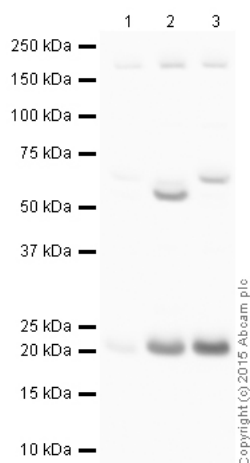
ab22604 staining Glutathione Peroxidase 1 in Human kidney. The paraffin embedded human kidney tissue was incubated with ab22604 (1/375 dilution) for 30 mins at room temperature. Antigen retrieval was performed by heat induction in citrate buffer pH 6. Ab22604 was tested in a tissue microarray (TMA) containing a wide range of normal and cancer tissues as well as a cell microarray consisting of a range of commonly used, well characterised human cell lines.

Further results for this antibody can be found at [www.proteinatlas.org](http://www.proteinatlas.org)



Immunocytochemistry/ Immunofluorescence - Anti-Glutathione Peroxidase 1 antibody (ab22604)

ICC/IF image of ab22604 stained human HepG2 cells. The cells were methanol fixed (5 min), permeabilised in 0.1% PBS-Tween (20 min) and incubated with the antibody (ab22604, 5µg/ml) for 1h at room temperature. 1%BSA / 10% normal goat serum / 0.3M glycine was used to block non-specific protein-protein interactions. The secondary antibody (green) was Alexa Fluor® 488 goat anti-rabbit IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red). DAPI was used to stain the cell nuclei (blue).



Western blot - Anti-Glutathione Peroxidase 1 antibody (ab22604)

**All lanes** : Anti-Glutathione Peroxidase 1 antibody (ab22604) at 1  $\mu\text{g/ml}$  (Blocked with 3% Milk)

**Lane 1** : Liver (Human) Tissue Lysate

**Lane 2** : Liver (Mouse) Tissue Lysate

**Lane 3** : Liver (Rat) Tissue Lysate

Lysates/proteins at 10  $\mu\text{g}$  per lane.

#### Secondary

**All lanes** : Goat Anti-Rabbit IgG H&L (HRP) preadsorbed at 1/50000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

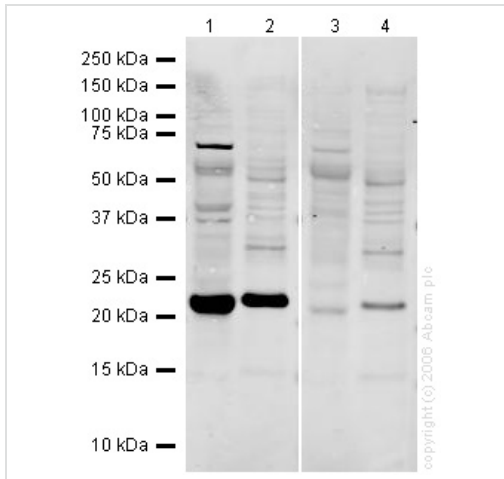
**Predicted band size:** 22 kDa

**Observed band size:** 22 kDa

**Additional bands at:** 190 kDa, 55 kDa, 65 kDa. We are unsure as to the identity of these extra bands.

**Exposure time:** 4 minutes

This blot was produced using a 4-12% Bis-tris gel under the MES buffer system. The gel was run at 200V for 35 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes. The membrane was then blocked for an hour using 3% milk before being incubated with ab22604 overnight at 4°C. Antibody binding was detected using an anti-rabbit antibody conjugated to HRP, and visualised using ECL development solution [ab133406](#).



Western blot - Anti-Glutathione Peroxidase 1 antibody (ab22604)

**All lanes** : Anti-Glutathione Peroxidase 1 antibody (ab22604) at 1 µg/ml

**Lane 1** : Human liver normal tissue lysate

**Lane 2** : Liver (Mouse) Tissue Lysate (ab7935)

**Lane 3** : Human liver normal tissue lysate with Human Glutathione Peroxidase 1 peptide (ab25301) at 1 µg/ml

**Lane 4** : Liver (Mouse) Tissue Lysate (ab7935) with Human Glutathione Peroxidase 1 peptide (ab25301) at 1 µg/ml

Lysates/proteins at 20 µg per lane.

### Secondary

**All lanes** : Goat polyclonal to Rabbit IgG at 1/10000 dilution

Performed under reducing conditions.

**Predicted band size:** 22 kDa

**Observed band size:** 22,24 kDa

[why is the actual band size different from the predicted?](#)

ab22604 detects a band of approximately 22 kDa in human liver lysate. The band detected in the mouse liver lysate runs slightly higher (~ 24kDa). We believe that these bands correspond to Glutathione Peroxidase 1 as they are both blocked by the addition of the immunizing peptide (ab25301).

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