abcam

Product datasheet

Anti-Glutathione Peroxidase 1 antibody [EPR3311] ab108429

KO VALIDATED Recombinant RabMAb

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Overview

Product name	Anti-Glutathione Peroxidase 1 antibody [EPR3311]
Description	Rabbit monoclonal [EPR3311] to Glutathione Peroxidase 1
Host species	Rabbit
Tested applications	**Suitable for:** Flow Cyt (Intra), WB, IHC-P **Unsuitable for:** ICC/IF
Species reactivity	**Reacts with:** Human **Predicted to work with:** Rat
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	Human fetal liver, SH SY5Y, and THP1 cell lysates; Human breast carcinoma tissue. WB: HEK-293T cell lysate.
General notes	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 production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**. Mouse: We have preliminary internal testing data to indicate this antibody may not react with this species. Please contact us for more information.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
Storage buffer	pH: 7.20 Preservative: 0.05% Sodium azide Constituents: 0.1% BSA, 40% Glycerol (glycerin, glycerine), 9.85% Tris glycine, 50% Tissue

	culture supernatant
Purity	Tissue culture supernatant
Clonality	Monoclonal
Clone number	EPR3311
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab108429 in the following tested applications.

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

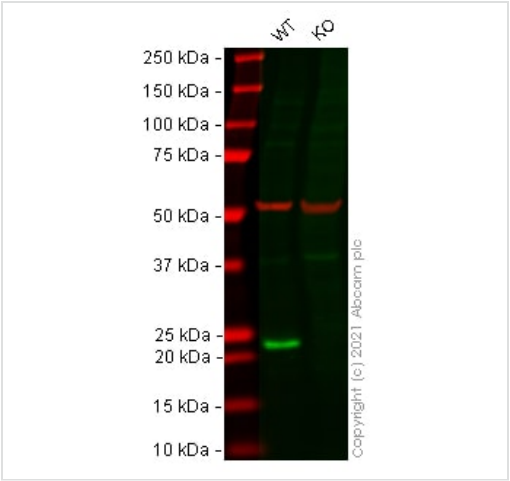
Application	Abreviews	Notes
Flow Cyt (Intra)		Use at an assay dependent concentration.
WB	★★★★☆ **(1)**	1/1000 - 1/10000. Detects a band of approximately 22 kDa (predicted molecular weight: 22 kDa).
IHC-P		1/100 - 1/250. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. Antigen retrieval is recommended.

Application notes Is unsuitable for ICC/IF.

Target

Function	Protects the hemoglobin in erythrocytes from oxidative breakdown.
Sequence similarities	Belongs to the glutathione peroxidase family.
Cellular localization	Cytoplasm.

Images



Western blot - Anti-Glutathione Peroxidase 1 antibody [EPR3311] (ab108429)

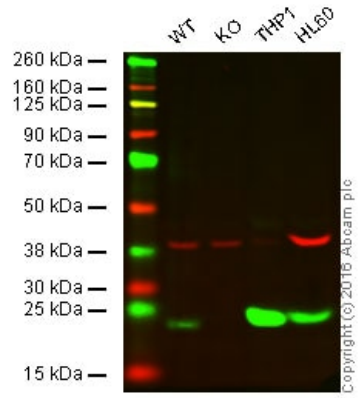
All lanes : Anti-Glutathione Peroxidase 1 antibody [EPR3311] (ab108429) at 1/1000 dilution

Lane 1 : Wild-type HEK-293T cell lysate
Lane 2 : GPX1 knockout HEK-293T cell lysate

Performed under reducing conditions.

Predicted band size: 22 kDa
Observed band size: 22 kDa

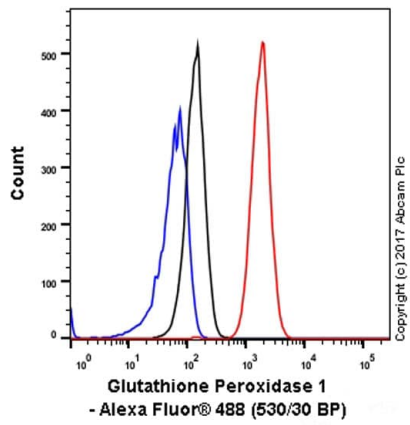
False colour image of Western blot: Anti-Glutathione Peroxidase 1 antibody [EPR3311] staining at 1/1000 dilution, shown in green; Mouse anti-Alpha Tubulin [DM1A] (**ab7291**) loading control staining at 1/20000 dilution, shown in red. In Western blot, ab108429 was shown to bind specifically to Glutathione Peroxidase 1. A band was observed at 22 kDa in wild-type HEK-293T cell lysates with no signal observed at this size in GPX1 knockout cell line **ab266650** (knockout cell lysate **ab256932**). To generate this image, wild-type and GPX1 knockout HEK-293T cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3 % milk in TBS-0.1 % Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged.Secondary antibodies used were Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed (**ab216776**) at 1/20000 dilution.



Western blot - Anti-Glutathione Peroxidase 1 antibody [EPR3311] (ab108429)

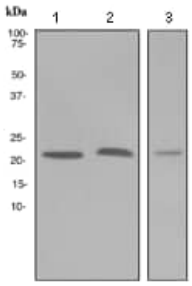
Lane 1: Wild-type HAP1 cell lysate (20 µg)
Lane 2: GPX1 knockout HAP1 cell lysate (20 µg)
Lane 3: THP1 cell lysate (20 µg)
Lane 4: HL60 cell lysate (20 µg)
Lanes 1 and 2: Merged signal (red and green). Green - ab108429, observed at 22 kDa. Red - loading control, **ab8245**, observed at 37 kDa.

ab108429 was shown to specifically react with Glutathione Peroxidase 1 in wild-type HAP1 cells. 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. ab108429 and **ab8245** (loading control to GAPDH) were diluted 1/1000 and 1/2000 respectively and 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.



Flow Cytometry (Intracellular) - Anti-Glutathione Peroxidase 1 antibody [EPR3311] (ab108429)

Intracellular Flow Cytometry analysis of THP-1 (human acute monocytic leukemia) cells labeling Glutathione Peroxidase 1 with purified ab108429 at 1/250 dilution (10ug/ml) (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. A Goat anti rabbit IgG (Alexa Fluorr® 488) (**ab150077**) (1/2000 dilution) was used as the secondary antibody. Rabbit monoclonal IgG (Black) (**ab172730**) was used as the isotype control, Cell without incubation with primary antibody and secondary antibody (Blue) were used as the unlabeled control.



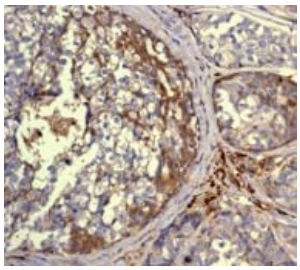
Western blot - Anti-Glutathione Peroxidase 1 antibody [EPR3311] (ab108429)

All lanes : Anti-Glutathione Peroxidase 1 antibody [EPR3311] (ab108429) at 1/1000 dilution

Lane 1 : Human fetal liver lysate
Lane 2 : SH SY5Y cell lysate
Lane 3 : THP1 cell lysate

Lysates/proteins at 10 µg per lane.

Predicted band size: 22 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Glutathione Peroxidase 1 antibody [EPR3311] (ab108429)

ab108429, at 1/100 dilution, staining Glutathione Peroxidase 1 in paraffin-embedded Human breast carcinoma tissue by Immunohistochemistry.

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

Anti-Glutathione Peroxidase 1 antibody [EPR3311] (ab108429)

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