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GPX7 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP22347c

Product Information

Application	WB, FC, IF, IHC-P-Leica, E
Primary Accession	Q96SL4
Other Accession	A6QLY2
Reactivity	Human, Mouse
Predicted	Bovine, Human, Rat, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Clone Names	RB58055
Calculated MW	20996

Additional Information

Gene ID	2882
Other Names	Glutathione peroxidase 7, GPx-7, GSHPx-7, 1.11.1.9, CL683, GPX7, GPX6
Target/Specificity	This GPX7 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 73-107 amino acids from the Central region of human GPX7.
Dilution	WB~~1:2000 FC~~1:25 IF~~1:25 IHC-P-Leica~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	GPX7 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	GPX7
Synonyms	GPX6
Function	Acts as an endoplasmic reticulum (ER) thiol peroxidase that maintains ER

	redox homeostasis and supports oxidative protein folding (PubMed:32719007). Rapidly reacts with hydrogen peroxide to form sulfenylated/disulfide intermediates and oxidizes protein disulfide isomerase (PDI) family members, promoting disulfide-bond formation (PubMed:21215271). Functions in a redox relay with ERO1A, using ERO1A-generated H(2)O(2) to drive PDI oxidation, linking peroxide detoxification to productive disulfide formation (PubMed:23919619). Protects esophageal epithelia from hydrogen peroxide-induced oxidative stress by reducing reactive oxygen species (ROS) and preventing oxidative DNA damage and double-strand breaks (PubMed:22157330).
Cellular Location	Endoplasmic reticulum
Tissue Location	Expressed in esophageal epithelial cells; expression is up-regulated after exposure to acidic bile acids

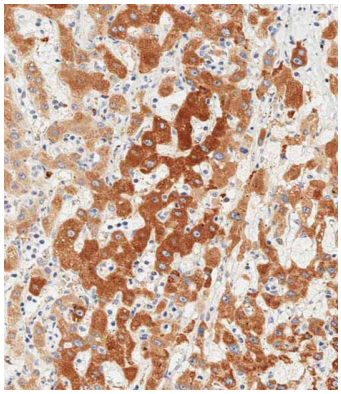
Background

It protects esophageal epithelia from hydrogen peroxide- induced oxidative stress. It suppresses acidic bile acid-induced reactive oxigen species (ROS) and protects against oxidative DNA damage and double-strand breaks.

References

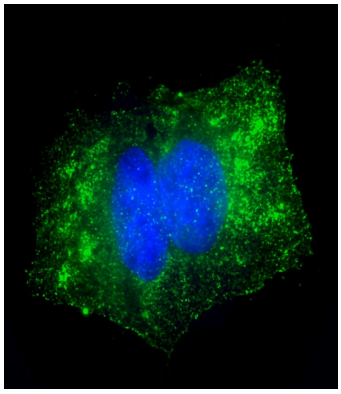
Gu S.,et al.Submitted (NOV-2000) to the EMBL/GenBank/DDBJ databases.
Clark H.F.,et al.Genome Res. 13:2265-2270(2003).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Gregory S.G.,et al.Nature 441:315-321(2006).
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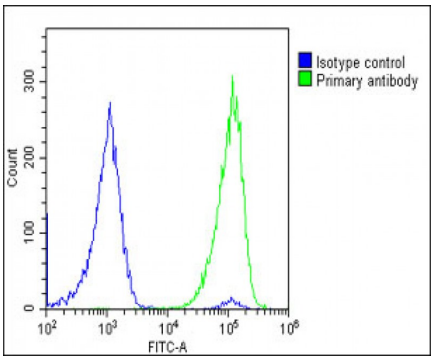
Images



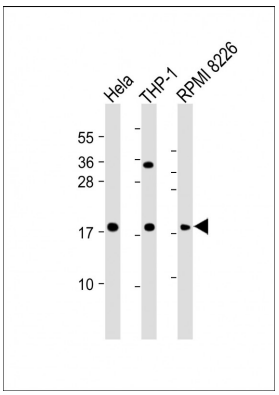
Immunohistochemical analysis of paraffin-embedded human liver tissue using AP22347c performed on the Leica® BOND RXm. Tissue was fixed with formaldehyde at room temperature; antigen retrieval was by heat mediation with a EDTA buffer (pH9. 0). Samples were incubated with primary antibody(1:1000) for 1 hours at room temperature. A undiluted biotinylated CRF Anti-Polyvalent HRP Polymer antibody was used as the secondary antibody.

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0. 1% Triton X-100 permeabilized U-2OS cells labeling GPX7 with AP22347c at 1/25 dilution, followed by Dylight® 488-conjugated goat anti-Rabbit IgG (OH191631) secondary antibody at 1/200 dilution (green). Immunofluorescence image showing cytoplasm staining on U-2OS cell line. Cytoplasmic actin is detected with Dylight® 554 Phalloidin (1186255) at 1/500 dilution (red). The nuclear counter stain is DAPI (blue).





Overlay histogram showing U-2 OS cells stained with AP22347c(green line). The cells were fixed with 2% paraformaldehyde (10 min) and then permeabilized with 90% methanol for 10 min. The cells were then icubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AP22347c, 1:25 dilution) for 60 min at 37ºC. The secondary antibody used was Goat-Anti-Rabbit IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed(OE188374) at 1/200 dilution for 40 min at 37ºC. Isotype control antibody (blue line) was rabbit IgG1 (1µg/1x10^6 cells) used under the same conditions. Acquisition of >10, 000 events was performed.



All lanes : Anti-GPX7 Antibody (Center) at 1:2000 dilution Lane 1: Hela whole cell lysate Lane 2: THP-1 whole cell lysate Lane 3: RPMI 8226 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 21 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

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