

# Product Datasheet

## Glutathione Peroxidase 4/GPX4 Antibody - BSA Free NBP2-54979

Unit Size: 100 ul

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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### Publications: 1

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**NBP2-54979****Glutathione Peroxidase 4/GPX4 Antibody - BSA Free**

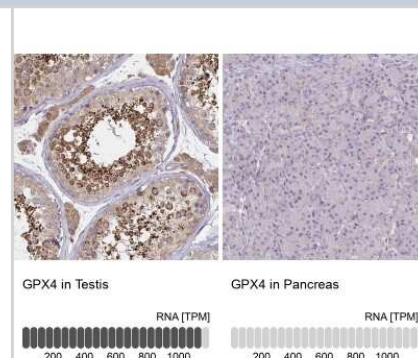
Product Information	
<b>Unit Size</b>	100 ul
<b>Concentration</b>	Concentrations vary lot to lot. See vial label for concentration. If unlisted please contact technical services.
<b>Storage</b>	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
<b>Clonality</b>	Polyclonal
<b>Preservative</b>	0.02% Sodium Azide
<b>Isotype</b>	IgG
<b>Purity</b>	Affinity purified
<b>Buffer</b>	PBS (pH 7.2) and 40% Glycerol

Product Description	
<b>Description</b>	Novus Biologicals Rabbit Glutathione Peroxidase 4/GPX4 Antibody - BSA Free (NBP2-54979) is a polyclonal antibody validated for use in IHC. Anti-Glutathione Peroxidase 4/GPX4 Antibody: Cited in 1 publication. All Novus Biologicals antibodies are covered by our 100% guarantee.
<b>Host</b>	Rabbit
<b>Gene ID</b>	2879
<b>Gene Symbol</b>	GPX4
<b>Species</b>	Human
<b>Reactivity Notes</b>	Use in Human reported in scientific literature (PMID:33707434).
<b>Immunogen</b>	This antibody was developed against a recombinant protein corresponding to the following amino acid sequence: NVKFDMFSKICVNGDDAHPLWKWMKIQPKGKGILGNAIKWNFTKFLIDKNGCV VKRYGPMEEPLVIEKDLPHY

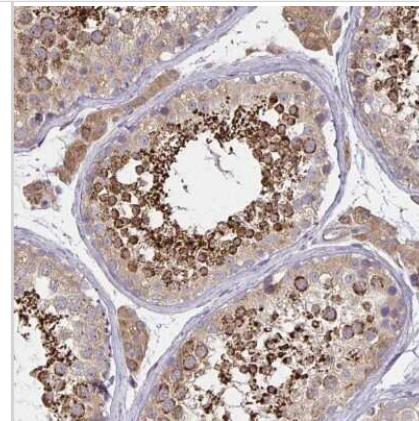
Product Application Details	
<b>Applications</b>	Immunohistochemistry-Paraffin, Immunohistochemistry
<b>Recommended Dilutions</b>	Immunohistochemistry 1:500 - 1:1000, Immunohistochemistry-Paraffin 1:500 - 1:1000
<b>Application Notes</b>	For IHC-Paraffin, HIER pH 6 retrieval is recommended.

**Images**

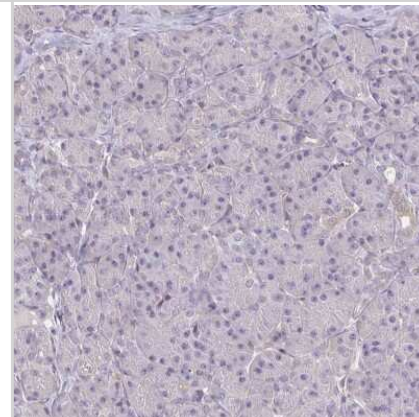
Immunohistochemistry-Paraffin: Glutathione Peroxidase 4/GPX4 Antibody [NBP2-54979] - Staining in human testis and pancreas tissues using anti-GPX4 antibody. Corresponding GPX4 RNA-seq data are presented for the same tissues.



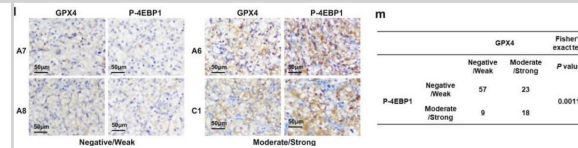
Immunohistochemistry-Paraffin: Glutathione Peroxidase 4/GPX4 Antibody [NBP2-54979] - Staining of human testis shows high expression.



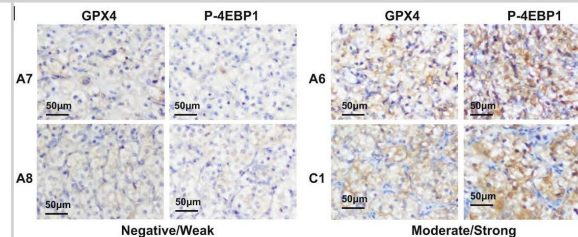
Immunohistochemistry-Paraffin: Glutathione Peroxidase 4/GPX4 Antibody [NBP2-54979] - Staining of human pancreas shows low expression as expected.



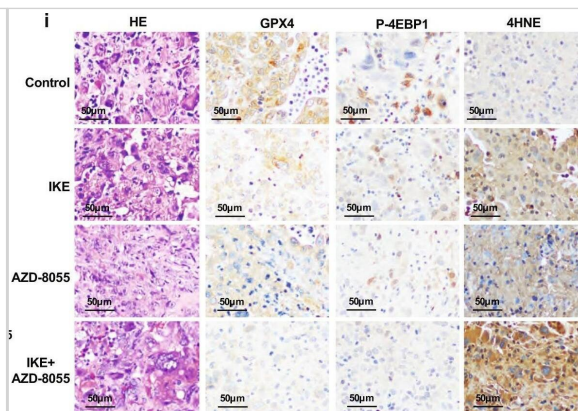
Immunohistochemistry: Glutathione Peroxidase 4/GPX4 Antibody [NBP2-54979] - Cyst(e)ine promotes Glutathione Peroxidase 4/GPX4 protein synthesis partly through Rag-mTORC1-4EBP signaling. l) Representative images from immunohistochemical staining of kidney tumor tissue microarray for Glutathione Peroxidase 4/GPX4 and P-4EBP1. m) Summary and statistical analysis of immunohistochemical staining results for Glutathione Peroxidase 4/GPX4 and P-4EBP1 in tumor tissue microarray. Tissue microarray analysis revealed that P-4EBP1 staining correlated with Glutathione Peroxidase 4/GPX4 level. Image collected and cropped by CiteAb from the following publication ([//pubmed.ncbi.nlm.nih.gov/33707434/](https://pubmed.ncbi.nlm.nih.gov/33707434/)) licensed under a CC-BY license.



Immunohistochemistry: Glutathione Peroxidase 4/GPX4 Antibody [NBP2-54979] - Cyst(e)ine promotes GPX4 protein synthesis partly through Rag-mTORC1-4EBP signaling. i) WB analysis of protein expression in control (sgCon) & 4EBP1/2-double-knockout (DKO-1 & DKO-2) UMRC6 cells. Image collected & cropped by CiteAb from following publication (<https://pubmed.ncbi.nlm.nih.gov/33707434/>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



**Immunohistochemistry: Glutathione Peroxidase 4/GPX4 Antibody [NBP2-54979] - mTORC1 inhibition sensitizes cancer cells or tumors to ferroptosis.** a UMRC6 cells were treated with 1  $\mu$ M RSL3 (or 1  $\mu$ M ML162), or 1  $\mu$ M Torin1, or both combined with or without 5  $\mu$ M Ferrostatin-1 (Ferr-1) or 100  $\mu$ M deferoxamine (DFO) for 6 h. Then lipid peroxidation was assessed using BODIPY™ 581/591 C11 staining followed by FACS analysis. b Bar graph showing the viability of UMRC6 cells treated with drugs using indicated combination. Concentration of each drug is described as follows. RSL3, 1  $\mu$ M; ML162, 1  $\mu$ M; Torin1, 1  $\mu$ M; Ferr-1, 5  $\mu$ M; DFO, 100  $\mu$ M. n = 3. c Bar graph showing the viability of indicated cells treated with 300 nM RSL3, or 1  $\mu$ M Torin1, or both for 8 h. n = 5. d Bar graph showing the viability of indicated cells treated with 300 nM ML162, or 1  $\mu$ M Torin1, or both for 8 h. n = 5. e Bar graph showing the viability of indicated cells treated with different concentrations of cystine for 48 h. n = 4. f Plot showing the viability of indicated cells treated with different concentrations of erastin for 36 h. n = 4. g Volumes of PDX tumors in mice treated daily with 30 mg/kg IKE, or 10 mg/kg AZD8055, or both at different time points as shown. n = 5 mice per group. h Percentages of P-4EBP1-, GPX4-, or 4-HNE-positive stained cells per field. n = 5 randomly selected high-power fields per group. i Haematoxylin & eosin & immunohistochemical staining of PDX tumor samples collected from mice at the end of treatments described in g. For all panels, error bars are mean  $\pm$  SD. If not otherwise specified, n indicates biologically independent repeats. P value was determined by two-tailed unpaired Student's t test. For f & g, p value was determined by two-way ANOVA test. Source data are provided as a Source Data file. Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/33707434>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



## Publications

Zhang Y, Swanda RV, Nie L et al. mTORC1 couples cyst(e)ine availability with GPX4 protein synthesis and ferroptosis regulation Nature communications 2021-03-11 [PMID: 33707434] (IHC-P, Human)

### Details:

Immunohistochemical analysis of human tumor tissue xenografted in mice.



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### **Products Related to NBP2-54979**

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NBP2-54979PEP	Glutathione Peroxidase 4/GPX4 Recombinant Protein Antigen
HAF008	Goat anti-Rabbit IgG Secondary Antibody [HRP]
NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control

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### **Limitations**

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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