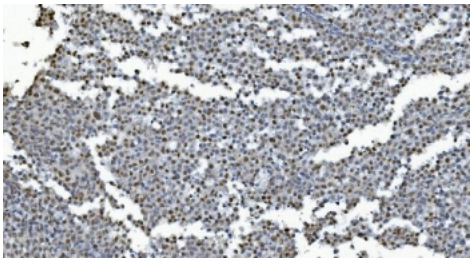
GLRX2 Antibody / Glutaredoxin-2 Mitochondrial Protein Antibody (RQ6094)

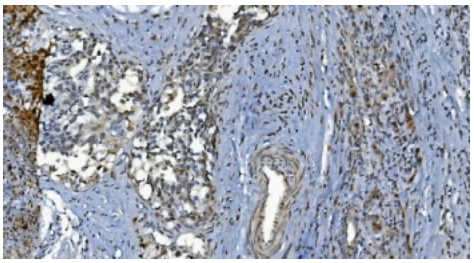
Catalog No.	Formulation	Size
RQ6094	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

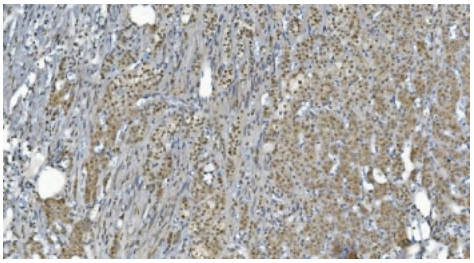
Availability	1-3 business days
Species Reactivity	Human, Mouse
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q9NS18
Localization	Nuclear, cytoplasmic
Applications	Western blot: 1-2ug/ml Immunohistochemistry (FFPE): 2-5ug/ml Immunofluorescence: 5ug/ml Direct ELISA: 0.1-0.5ug/ml
Limitations	This GLRX2 Antibody / Glutaredoxin-2 Mitochondrial Protein Antibody is available for research use only.



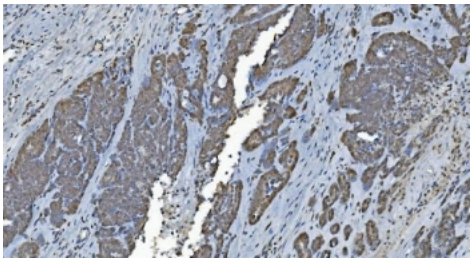
GLRX2 Antibody in Human Testis Cancer IHC. Immunohistochemistry staining of FFPE human testis cancer tissue with GLRX2 Antibody shows widespread granular cytoplasmic staining in tumor cells, with variable staining intensity across the tissue. The pattern is consistent with the intracellular distribution expected for this Glutaredoxin-2 Mitochondrial Protein Antibody. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 8 EDTA for 20 min followed by cooling before testing.



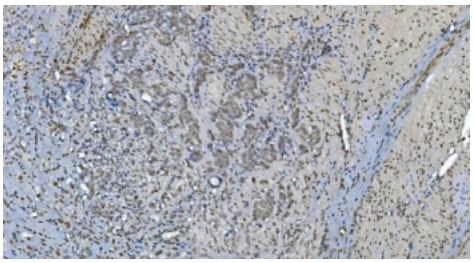
GLRX2 Antibody in Human Bladder Cancer IHC. Immunohistochemistry staining of FFPE human bladder cancer tissue with GLRX2 Antibody shows heterogeneous cytoplasmic immunoreactivity, including prominent staining within tumor-associated cellular regions and weaker staining in surrounding stromal tissue. This Glutaredoxin-2 Mitochondrial Protein Antibody was tested following heat-induced epitope retrieval by boiling tissue sections in pH 8 EDTA for 20 min and allowing them to cool before testing.



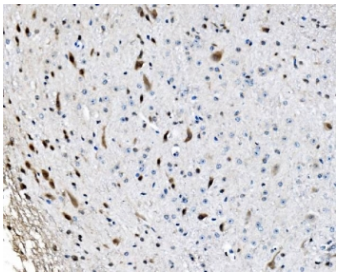
GLRX2 Antibody in Human Renal Carcinoma IHC. Immunohistochemistry staining of FFPE human renal carcinoma tissue with GLRX2 Antibody demonstrates broad cytoplasmic staining, with stronger immunoreactivity in subsets of cells and variable signal across the tumor tissue. This staining is consistent with detection of the intracellular redox protein targeted by this Glutaredoxin-2 Mitochondrial Protein Antibody. Heat-induced epitope retrieval was performed in pH 8 EDTA for 20 min followed by cooling.



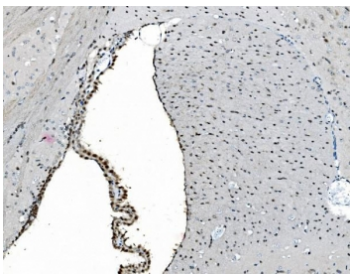
GLRX2 Antibody in Human Ovarian Cancer IHC. Immunohistochemistry staining of FFPE human ovarian cancer tissue with GLRX2 Antibody shows prominent cytoplasmic staining within epithelial tumor structures, with comparatively weaker staining in surrounding stromal areas. This Glutaredoxin-2 Mitochondrial Protein Antibody was tested following heat-induced epitope retrieval by boiling tissue sections in pH 8 EDTA for 20 min and allowing them to cool before testing.



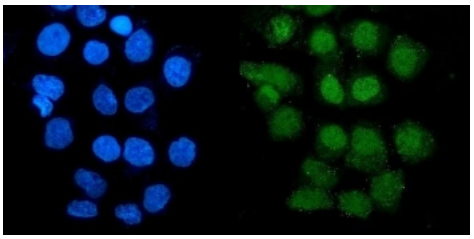
GLRX2 Antibody in Human Gastric Cancer IHC. Immunohistochemistry staining of FFPE human gastric cancer tissue with GLRX2 Antibody demonstrates heterogeneous cytoplasmic staining within tumor-associated glandular structures and surrounding cellular regions. The observed intracellular signal supports detection with this Glutaredoxin-2 Mitochondrial Protein Antibody. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 8 EDTA for 20 min followed by cooling before testing.



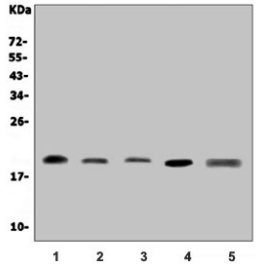
GLRX2 Antibody in Mouse Brain IHC. Immunohistochemistry staining of FFPE mouse brain tissue with GLRX2 Antibody shows prominent staining in scattered neuronal cell bodies, with additional lower-intensity signal in the surrounding neuropil. This Glutaredoxin-2 Mitochondrial Protein Antibody was tested following heat-induced epitope retrieval by boiling tissue sections in pH 8 EDTA for 20 min and allowing them to cool before testing.



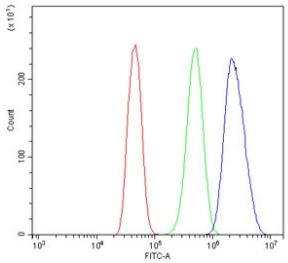
GLRX2 Antibody in Mouse Brain Ventricular Region IHC. Immunohistochemistry staining of FFPE mouse brain tissue with GLRX2 Antibody shows strong immunoreactivity along cells lining the ventricular surface, with weaker staining in the adjacent brain parenchyma. This regional pattern demonstrates GLRX2 detection with the Glutaredoxin-2 Mitochondrial Protein Antibody. Heat-induced epitope retrieval was performed in pH 8 EDTA for 20 min followed by cooling before testing.



GLRX2 Antibody in A431 Epidermoid Carcinoma Cells IF. Immunofluorescence staining of FFPE human A431 epidermoid carcinoma cells with GLRX2 Antibody shows green intracellular fluorescence with both cytoplasmic and nuclear-associated signal, while nuclei are counterstained with DAPI in blue. This Glutaredoxin-2 Mitochondrial Protein Antibody was tested following heat-induced epitope retrieval by steaming in pH 6 citrate buffer for 20 min.



GLRX2 Antibody in Human Cell Lines and Mouse Thymus WB. Western blot testing with GLRX2 Antibody shows a clean predominant band at approximately 18-20 kDa across the five samples, consistent with the predicted molecular weight of approximately 18 kDa. Lanes 1-5: human K562, U-87 MG, PC-3, HepG2, and mouse thymus lysates, respectively. Signal intensity varies among samples, with particularly strong detection in HepG2 lysate. The observed band supports detection of glutaredoxin-2 by this Glutaredoxin-2 Mitochondrial Protein Antibody.



GLRX2 Antibody in Caco-2 Colorectal Adenocarcinoma Cells FACS. Flow cytometry testing of human Caco-2 colorectal adenocarcinoma cells with GLRX2 Antibody at 1 ug/million cells shows a pronounced rightward shift of the antibody-stained population (blue) relative to the isotype control (green) and cells-alone control (red). Cells were blocked with goat serum before testing with this Glutaredoxin-2 Mitochondrial Protein Antibody, demonstrating readily detectable GLRX2-associated fluorescence under the assay conditions.

Description

GLRX2 Antibody / Glutaredoxin-2 Mitochondrial Protein Antibody recognizes glutaredoxin-2, a member of the glutaredoxin family of small oxidoreductases involved in maintaining cellular redox homeostasis. Encoded by the GLRX2 gene, glutaredoxin-2 participates in glutathione-dependent thiol-disulfide exchange reactions and helps regulate the oxidation state of protein cysteine residues. Its activity connects the glutathione redox system with cellular responses to oxidative stress and changes in metabolic state.

GLRX2 is particularly associated with mitochondrial redox regulation. The protein contains an iron-sulfur cluster that can influence its activity and allows glutaredoxin-2 to respond to changes in the cellular redox environment. Under oxidative conditions, activation of GLRX2 can promote reversible protein deglutathionylation and help restore the function of redox-sensitive proteins. These properties distinguish GLRX2 from classical glutaredoxins and support its role in protecting mitochondrial proteins against oxidative modification.

Alternative transcription and splicing of GLRX2 generate isoforms with different intracellular distributions. The mitochondrial form contains an N-terminal targeting sequence that directs the protein to mitochondria, whereas other GLRX2 isoforms can occur outside the organelle. This isoform diversity allows glutaredoxin-2 activity to contribute to redox control in multiple cellular compartments while maintaining an especially important relationship with mitochondrial function.

Within mitochondria, GLRX2 has been investigated for its involvement in respiratory function, redox-sensitive signaling, cellular energy metabolism, and protection from oxidative stress. By regulating reversible protein glutathionylation, GLRX2 can influence proteins whose activities depend upon the oxidation state of critical cysteine residues. Its relationship with mitochondrial redox balance has also generated interest in the protein in studies of cell survival, metabolic regulation, oxidative injury, and disease-associated changes in mitochondrial physiology.

NSJ Bioreagents offers this Glutaredoxin-2 Mitochondrial Protein Antibody for research into GLRX2 expression and redox biology. A GLRX2 Antibody can support investigation of mitochondrial redox regulation, glutathione-dependent protein

modification, oxidative stress responses, and mechanisms that maintain cellular redox homeostasis.

Explore our Mitochondria Marker Antibody page for additional reagents targeting proteins involved in mitochondrial function, metabolism, redox regulation, and cellular homeostasis.

Application Notes

Optimal dilution of the GLRX2 Antibody / Glutaredoxin-2 Mitochondrial Protein Antibody should be determined by the researcher.

Immunogen

A human recombinant partial protein (amino acids M1-Q164) was used as the immunogen for the GLRX2 antibody.

Storage

After reconstitution, the GLRX2 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

GLRX2 antibody, Glutaredoxin-2 antibody, Glutaredoxin 2 antibody, GRX2 antibody, Glutaredoxin-2 mitochondrial antibody, Mitochondrial glutaredoxin-2 antibody

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