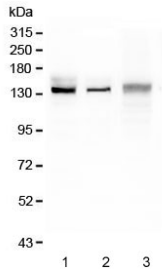
CP Antibody / Metal Homeostasis Protein Antibody (R32261)

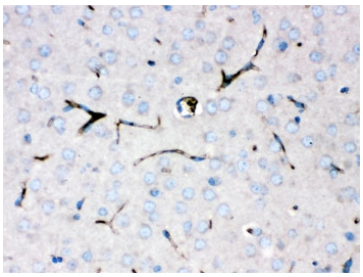
Catalog No.	Formulation	Size
R32261	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

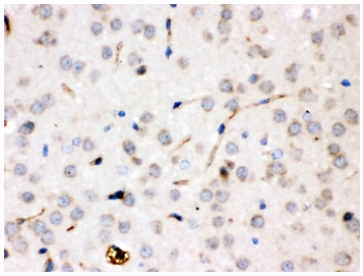
Availability	1-3 business days
Species Reactivity	Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2.5% BSA and 0.025% sodium azide
UniProt	Q61147
Applications	Western blot: 0.1-0.5ug/ml IHC (FFPE): 0.5-1ug/ml
Limitations	This CP Antibody / Metal Homeostasis Protein Antibody is available for research use only.



CP Antibody Liver Tissue WB. Western blot analysis of rat liver (lane 1), mouse liver (lane 2), and mouse HEPA1-6 cell lysate (lane 3) using CP antibody demonstrates prominent bands at approximately 130-140 kDa, consistent with the expected molecular weight of mature Ceruloplasmin (CP). Ceruloplasmin is a liver-derived copper-binding glycoprotein and multicopper ferroxidase that plays a central role in systemic copper transport, iron metabolism, and maintenance of metal ion homeostasis. Synthesized primarily by hepatocytes and secreted into circulation, Ceruloplasmin facilitates the oxidation of ferrous iron to ferric iron, supporting iron loading onto transferrin and efficient iron transport throughout the body. Detection in both liver tissues and hepatic-derived cells is consistent with the established role of the liver as the principal site of Ceruloplasmin production. The observed molecular weight is consistent with the heavily glycosylated nature of mature Ceruloplasmin.



CP Antibody Mouse Brain IHC. Immunohistochemical staining of FFPE mouse brain tissue using CP antibody demonstrates distinct staining of ramified glial-like cells distributed throughout the neural parenchyma. The staining pattern is consistent with expression of Ceruloplasmin (CP), a multicopper ferroxidase involved in iron metabolism, copper transport, and maintenance of metal ion homeostasis within the central nervous system. In addition to its well-established role as a circulating plasma protein, Ceruloplasmin contributes to local regulation of iron handling and oxidative balance in neural tissues. The observed cellular staining supports the importance of CP in maintaining iron homeostasis and protecting against metal-associated oxidative stress within the brain. HIER: boil paraffin sections in pH 6, 10 mM citrate buffer for 20 minutes and allow to cool prior to staining.



CP Antibody Rat Brain IHC. Immunohistochemical staining of FFPE rat brain tissue using CP antibody demonstrates selective staining of scattered neural parenchymal cells with delicate cellular processes extending through the surrounding tissue. The staining pattern is consistent with expression of Ceruloplasmin (CP), a multicopper ferroxidase that contributes to iron metabolism, copper transport, and maintenance of metal ion homeostasis within the central nervous system. In addition to its role as a major circulating plasma protein, Ceruloplasmin participates in local regulation of iron handling and redox balance in neural tissues, helping support normal cellular function and protection from metal-associated oxidative stress. The observed staining distribution is consistent with the established involvement of Ceruloplasmin in neural iron homeostasis. HIER: boil paraffin sections in pH 6, 10 mM citrate buffer for 20 minutes and allow to cool prior to staining.

Description

CP antibody is useful for studying Ceruloplasmin (CP), a multicopper ferroxidase that plays a central role in iron metabolism, copper transport, and maintenance of metal ion homeostasis. Ceruloplasmin functions by oxidizing ferrous iron (FeÃ‚Â²Ã¢Â•Âº) to ferric iron (FeÃ‚Â³Ã¢Â•Âº), facilitating iron loading onto transferrin and supporting efficient iron transport throughout the body. Through these activities, CP contributes to the regulation of mineral metabolism, cellular homeostasis, and normal physiologic function.

Ceruloplasmin is synthesized primarily in the liver and secreted into circulation, where it serves as the principal copper-carrying protein in plasma. In addition to its systemic role in mineral transport, CP participates in local tissue-specific pathways that regulate iron handling and oxidative balance. These functions are particularly important in tissues that require tightly controlled metal homeostasis, where disruptions in iron or copper metabolism can influence cellular function and tissue integrity.

As a ferroxidase and metal transport protein, Ceruloplasmin serves as an important link between copper metabolism, iron utilization, and redox regulation. By promoting the conversion of iron into forms suitable for transport and storage, CP helps maintain physiologic mineral balance while limiting the accumulation of reactive iron species that may contribute to oxidative stress. These activities support normal cellular metabolism, tissue maintenance, and systemic homeostasis.

Ceruloplasmin has become an important target in studies of metabolism, hematology, liver biology, neuroscience, and oxidative stress. Within the central nervous system, CP contributes to local iron homeostasis and is thought to participate in pathways that regulate metal handling and cellular protection. Because iron and copper metabolism influence numerous biologic processes, proteins involved in these pathways remain important subjects of investigation across multiple fields of biomedical research.

Beyond its established role in mineral transport, Ceruloplasmin participates in broader physiologic networks associated with antioxidant defense and maintenance of tissue homeostasis. Analysis of CP expression can provide insight into mechanisms governing metal ion regulation, cellular metabolism, and systemic physiologic balance. As a result,

Ceruloplasmin is frequently investigated in studies involving iron metabolism, copper transport, oxidative stress responses, neurobiology, liver function, and metabolic regulation.

CP antibodies are commonly used in immunohistochemistry, western blotting, immunofluorescence, flow cytometry, and related protein detection applications. These reagents support investigations of iron metabolism, copper transport, ferroxidase activity, metal ion homeostasis, neural iron regulation, oxidative stress responses, and systemic metabolic function.

Learn more about Ceruloplasmin function in iron metabolism, copper transport, ferroxidase activity, and metal ion homeostasis on our Ceruloplasmin Antibody page.

Application Notes

Optimal dilution of the CP Antibody / Metal Homeostasis Protein Antibody should be determined by the researcher.

Immunogen

Amino acids 20-258 of mouse Ceruloplasmin were used as the immunogen for the CP antibody.

Storage

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

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