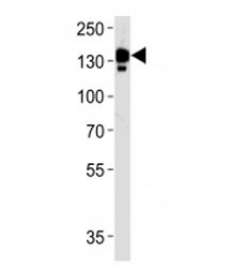
Ceruloplasmin Antibody / Plasma Copper-Binding Protein Antibody (F50323)

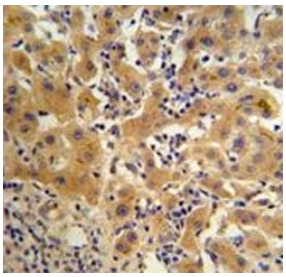
Catalog No.	Formulation	Size
F50323-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F50323-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

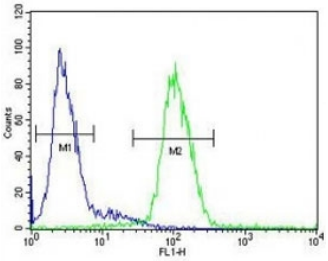
Availability	1-3 business days
Species Reactivity	Human, Mouse
Format	Purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Purified
UniProt	P00450
Localization	Cytoplasmic
Applications	Western blot: 1:1000 IHC (Paraffin): 1:50-1:100 Flow Cytometry: 1:10-1:50
Limitations	This Ceruloplasmin Antibody / Plasma Copper-Binding Protein Antibody is available for research use only.



Ceruloplasmin Antibody Human Plasma WB. Western blot analysis of human blood plasma lysate using Ceruloplasmin Antibody / Plasma Copper-Binding Protein Antibody demonstrates a strong band at approximately 130 kDa, consistent with the expected molecular weight of mature Ceruloplasmin (CP). Ceruloplasmin is the principal copper-carrying glycoprotein in plasma and plays a central role in systemic copper transport, iron metabolism, and maintenance of metal ion homeostasis. Synthesized primarily by the liver and secreted into circulation, Ceruloplasmin functions as a multicopper ferroxidase that oxidizes ferrous iron to ferric iron, facilitating iron loading onto transferrin and supporting efficient iron transport throughout the body. The prominent plasma-associated signal is consistent with the abundant circulating expression of Ceruloplasmin and its established role in mineral transport, metabolic regulation, and physiologic homeostasis.



Ceruloplasmin antibody IHC analysis in formalin fixed and paraffin embedded human hepatocarcinoma



Ceruloplasmin antibody flow cytometric analysis of HepG2 cells (green) compared to a negative control (blue).

Description

Ceruloplasmin antibody is useful for studying Ceruloplasmin (CP), a circulating copper-binding glycoprotein that serves as the principal carrier of copper in plasma. Synthesized primarily by hepatocytes, Ceruloplasmin transports the majority of circulating copper while simultaneously functioning as a ferroxidase enzyme that contributes to systemic iron metabolism. Through these activities, CP occupies a central position in pathways that regulate mineral transport, nutrient utilization, and physiologic homeostasis.

Ceruloplasmin is secreted into the bloodstream where it binds multiple copper atoms and facilitates their transport to tissues throughout the body. In addition to its copper-carrying function, Ceruloplasmin oxidizes ferrous iron (FeÃ‚Â²Ã¢Â•Âº) to ferric iron (FeÃ‚Â³Ã¢Â•Âº), supporting iron loading onto transferrin and promoting efficient iron distribution. These dual roles link copper transport and iron metabolism within a coordinated regulatory system that maintains mineral balance.

As a plasma copper-binding protein, Ceruloplasmin is an important component of pathways involved in hematologic function, oxidative balance, and metabolic regulation. The protein contributes to maintenance of circulating metal ion homeostasis while helping limit the accumulation of reactive iron species that may promote oxidative stress. Because of these functions, CP has become a widely studied target in metabolism, liver biology, hematology, and mineral transport research.

Ceruloplasmin expression is closely associated with hepatic function and systemic metabolic activity. Alterations in circulating Ceruloplasmin levels have been investigated in studies involving iron handling, copper metabolism, inflammation, oxidative stress, and liver physiology. Analysis of Ceruloplasmin expression can therefore provide valuable insight into mechanisms governing mineral transport and systemic metabolic regulation.

Ceruloplasmin antibodies are commonly used in western blotting, immunohistochemistry, immunofluorescence, ELISA, and related protein detection applications. These reagents support investigations of copper transport, plasma protein biology, ferroxidase activity, iron metabolism, liver function, oxidative stress responses, and systemic metal ion homeostasis.

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

Application Notes

Titration of the Ceruloplasmin Antibody / Plasma Copper-Binding Protein Antibody may be required due to differences in

protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 121-151 from the human protein was used as the immunogen for this Ceruloplasmin antibody.

Storage

Aliquot the Ceruloplasmin antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

CP Antibody, Copper Transport Protein Antibody, Plasma Copper-Binding Protein Antibody, Ferroxidase Antibody, Copper Carrier Protein Antibody, Serum Ceruloplasmin Antibody

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