SunLong Biotech Co.,LTD
Tel: 0086-571-56623320 Fax:0086-571-56623318
E-mail:sales@sunlongbiotech.com
www.sunlongbiotech.com

[Primary Antibody]

Rabbit Anti-Ceruloplasmin antibody

Catalog Number: SL2373R

FOR RESEARCH USE ONLY

[DATASHEET]

Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Target:	Ceruloplasmin
Immunogen:	KLH conjugated synthetic peptide derived from human Ceruloplasmin: 551-650/1065
Purification:	affinity purified by Protein A
Concentration:	1mg/ml
Storage:	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Applications:	WB=1:500-2000 IHC-P=1:100-500 IHC-F=1:100-500 IF=1:100-500 （Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Reactivity:	Human,Mouse,Rat(predicted:Dog,Rabbit)
Predicted MW.:	120kDa
Subcellular Location:	Secretory protein
Background:	Caeruloplasmin is a copper binding plasma glycoprotein consisting of a single polypeptide chain. It has a molecular weight of 132kDa and occurs in plasma at a concentration of 150-500 mg/L. Although the physiological functions of Caeruloplasmin are not fully understood it is implicated in a number of possible functions. 95% of plasma copper is bound to Caeruloplasmin, implying some involvement in copper transport. Caeruloplasmin has been described as both an oxidant and an antioxidant, its exact role or roles in this respect are not clear. Plasma levels of Caeruloplasmin are elevated after inflammation and trauma and it is therefore classified as an acute phase protein. The measurement of Caeruloplasmin in plasma is useful in the diagnosis of

Important Note: This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

	Wilson's disease, where levels are greatly reduced. Caeruloplasmin is extremely labile in plasma and rapidly degrades to 115kDa and 19kDa fragments. The age of plasma samples should therefore be taken into account when interpreting immunological analysis of caeruloplasmin. **Function:** Ceruloplasmin is a blue, copper-binding (6-7 atoms per molecule) glycoprotein. It has ferroxidase activity oxidizing Fe(2+) to Fe(3+) without releasing radical oxygen species. It is involved in iron transport across the cell membrane. Provides Cu(2+) ions for the ascorbate-mediated deaminase degradation of the heparan sulfate chains of GPC1. May also play a role in fetal lung development or pulmonary antioxidant defense. **Subcellular Location:** Secreted. Note=Colocalizes with GCP1 in secretory intracellular compartments. **Tissue Specificity:** Expressed by the liver and secreted in plasma. DISEASE: Aceruloplasminemia (ACERULOP) [MIM:604290]: An autosomal recessive disorder of iron metabolism characterized by iron accumulation in the brain as well as visceral organs. Clinical features consist of the triad of retinal degeneration, diabetes mellitus and neurological disturbances. Note=The disease is caused by mutations affecting the gene represented in this entry. Note=Ceruloplasmin levels are decreased in Wilson disease, in which copper cannot be incorporated into ceruloplasmin in liver because of defects in the copper-transporting ATPase 2. **Similarity:** Belongs to the multicopper oxidase family. Contains 3 F5/8 type A domains. Contains 6 plastocyanin-like domains. **Database links:** **Entrez Gene:** 1356 Human **Entrez Gene:** 12870 Mouse Omim: 117700 Human **SwissProt:** P00450 Human **SwissProt:** Q61147 Mouse **Unigene:** 558314 Human **Unigene:** 13787 Mouse Ceruloplasmin (CER), also known as copper oxidase, is a copper-containing α2glycoprotein. CER has oxidase activity and acts as an antioxidant. In the blood circulation, the antioxidant activity of CER can prevent the formation of lipid peroxides and free radicals in tissues, which is particularly important during inflammation. It is also an acute phase reactant protein. Ceruloplasmin has the ability to catalyze the oxidation of polyphenol and polyamine substrates. Ceruloplasmin has genetic gene polymorphism. Its role

Important Note: This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

SunLong Biotech Co.,LTD
Tel: 0086-571-56623320 Fax:0086-571-56623318
E-mail:sales@sunlongbiotech.com
www.sunlongbiotech.com

	is to regulate the distribution of copper in various parts of the body and synthesize copper-containing enzyme proteins. It is generally believed that ceruloplasmin is synthesized by the liver, partly excreted by the biliary tract, and its content in urine is very low. The determination of ceruloplasmin has certain significance for the diagnosis of some liver, gallbladder, and kidney diseases.

[VALIDATION IMAGES]

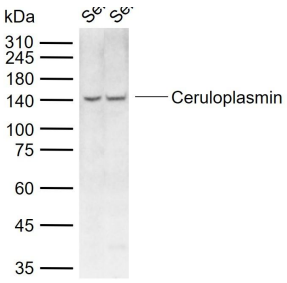


Figure 1. Sample: Lane 1: Mouse Serum tissue lysates Lane 2: Rat Serum tissue lysates Primary: Anti-Ceruloplasmin (SL2373R) at 1/1000 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 120 kDa Observed band size: 140 kDa

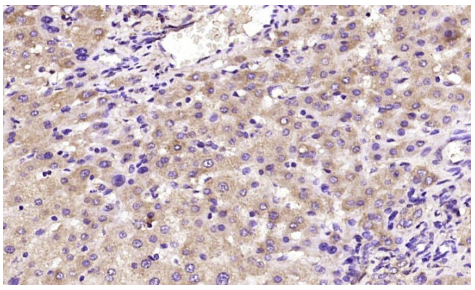


Figure 2. Paraformaldehyde-fixed, paraffin embedded (human liver tissue); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Ceruloplasmin) Polyclonal Antibody, Unconjugated (SL2373R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining

Important Note: This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.