

**Product Specification Sheet**

**Human Ceruloplasmin (Cp) Antibodies**

<b>Cat. #</b> CP11-S	<b>Rabbit</b> Anti-Human Cp antiserum	<b>SIZE:</b> 100 ul
<b>Cat. #</b> CP12-A	<b>Goat</b> Anti-Human Cp IgG#2	<b>SIZE:</b> 100 ug
<b>Cat. #</b> CP11-C	Human Cp purified protein WB +ve control	<b>SIZE:</b> 100 ul

**Ceruloplasmin (Cp)** is a plasma metalloprotein synthesized and secreted by the liver. Cp (also known as ferroxidase; iron (II):oxygen oxidoreductase, EC 1.16.3.1) is a blue alpha-2-glycoprotein that binds 90 to 95% of plasma copper and has 6 or 7 cupric ions per molecule. It is involved in peroxidation of Fe(II) transferrin to form Fe(III) transferrin. Human Cp is a single polypeptide chain (1065 aa, 135 kDa; chromosome 8q21.13-q23.1) structurally similar to factors V and VIII. Cp also has abundant expression in specific populations of glial cells within the brain. Hereditary Cp deficiency have profound iron accumulation in most tissues. Cp -/- mice showed no abnormalities in cellular iron uptake but a striking impairment in the movement of iron out of reticuloendothelial cells and hepatocytes. Cp may play an essential physiologic role in determining the rate of iron efflux from cells with mobilizable iron stores.

Purified human Cp protein is formulated in SDS-PAGE sample buffer (reduced) to be used as a **positive control (Cat #CP11-C)** for various anti-Cp antibodies using Western blotting. It is ready to be loaded on gels after heating (10 ul/lane). This preparation is biologically inactive and it is not suitable for other applications such as ELISA. We provide the purified protein **cat #CP15-N** in a buffer (100 mM KCl, 20 mM e-aminocaproic acid, pH 6.8 buffer) at 100 ug/100ul). This preparation can be used for ELISA or diluted in other appropriate buffers.

**Source of Antigen and Antibodies**

**#CP11-S**

<b>Antigen</b>	Cp was purified from human plasma
<b>Ab Host/type</b>	Rabbit, Polyclonal antiserum # <b>CP11-S</b>
<b>2-Ab</b>	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
<b>-ve control IgG</b>	Cat # 20009-1, Rabbit (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as -ve control

**#CP12-A**

<b>Antigen</b>	Purified <b>bovine pancreatic DNase 1</b> (EC 3.1.21.1)
<b>Ab Host/type</b>	Goat, Polyclonal purified IgG, purified over antigen-agarose (Cat # CP12-A)
<b>2-Ab</b>	<b>Rabbit Anti-goat IgG-HRP conjugate</b> Cat # 30220 (AP, biotin, FITC conjugates also available)
<b>-ve control IgG</b>	<b># 20011-1, Goat (non-immune) IgG, purified, suitable for ELISA, Western, IHC as -ve control</b>

**Form & Storage of Antibodies/Peptide Control**

**Antiserum (unpurified)**

00ul solution lyophilized powder  
Supplied in Buffer: 0.05% azide  
**Reconstitute** powder in 100 ul PBS

**Storage**

**Short-term:** unopened, undiluted vials for less than a week at 4oC.

**Long-term:** at -20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

**Stability:** 6-12 months at -20oC or below.

**Shipping:** 4oC for solutions and room temp for powder.

**Recommended Usage**

**Western Blotting** (1:1K-5K for antiserum or ascites using Chemiluminescence technique). Cp is ~135 kDa.

**ELISA** (1:100K; using 50-100 ng control antigen/well).

**Histochemistry & Immunofluorescence:** Not tested

**Specificity & Cross-reactivity**

The antibodies have been tested in human but crossreactivity is expected with mouse and rat Cp. Antibody cross-reactivity in various species has not been studied. Western blot +ve control should be run to identify the appropriate Cp band and find optimum antibody dilutions.

**General References:** (1). Koschinsky ML et al (1986) PNAS 83, 5086-5090; Daimon M et al (1995) BBRC 208, 1028-1035; Yang F et al (1986) PNAS 83, 3257-3261; Yakahashi N et al (1984) PNAS 81, 390-394; YANG Fm et al (1990) JBC 265, 10780-10785

\*This product is for in vitro research use only.

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