

**Product Specification Sheet**

**Rat Ceruloplasmin (Cp) Antibodies and positive control**

<b>Cat. #</b> CP17-A	<b>Rabbit</b> Anti-Rat Cp IgG, aff pure	<b>SIZE:</b> 100 ul
<b>Cat. #</b> CP17-C	<b>Purified</b> Rat Cp protein control for Western Blots	<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  $\pm$  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.

**Source of Antigen and Antibodies**

<b>Antigen</b>	Purified <b>Rat Ceruloplasmin protein</b>
<b>Ab Host/type</b>	Rabbit, Polyclonal purified IgG, purified over antigen-agarose ( <b>Cat # CP17-A</b> ); concn ~100 ug/100 ul
<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># 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as -ve control</b>

Rat Cp protein (~120 Kda) was purified from rat serum (>95%). For Western blot +ve control (**Cat # CP17-C**) is supplied in SDS-PAGE sample buffer (reduced). Load 10 ul/lane of **CP17-C** for good visibility with antibody Cat # **CP17-A**. Store at -20oC in suitable size aliquots. SDS may crystallize in cold conditions. It should redissolve by warming before taking it from the stock. It should be heated once prior to loading on gels. If the product has been stored for several weeks, then it may be preferable to add 5 ul of fresh 2x sample buffer per 10 ul of the **CP17-C** solution prior to heating and loading on gels. This preparation is not biologically active. It is not suitable for ELISA or other applications where native protein is required. Do not freeze, thaw, or heat repeatedly

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

**Antibody (purified)**

100ug solution lyophilized powder  
Supplied in Buffer: PBS, 0.2% BSA, and 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 aff pure IgG using Chemiluminescence technique). Cp is ~120 kDa.

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

**Histochemistry & Immunofluorescence:** Not tested

**Specificity & Cross-reactivity**

The antibodies have been tested in Rat but crossreactivity is expected with other species. Antibody cross-reactivity in various species has not been studied. Antibodies to human, mouse, rat Cp and the purified proteins are also available. Purified rat Cp protein #CP17-C can be used as positive controls for western blots.

**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.

CP17-A-C

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