

ceruloplasmin (H-60): sc-20957

BACKGROUND

Ceruloplasmin (CP) is a blue plasma glycoprotein that is synthesized in hepatocytes and transports copper throughout the body. Also known as ferroxidase, ceruloplasmin is the product of an intragenic triplication and is composed of three homologous domains. Two splice variants, CP-1 and CP-2, have differential expression in specific tissues. Ceruloplasmin mRNAs are expressed in human liver, macrophages and lymphocytes. Ceruloplasmin binds copper and has six or seven cupric ions per molecule. It is involved in peroxidation of Fe(II) transferrin to form Fe(III) transferrin. Ceruloplasmin is proteolytically degraded to a short form, which still possesses ferroxidase activity. However, only the intact long form is able to catalyze iron loading into ferritin, indicating that the structural integrity of ceruloplasmin is essential for the enzyme to effectively catalyze iron loading into ferritin. Ceruloplasmin also induces low density lipoprotein oxidation *in vitro*, an action that depends on the presence of a single, chelatable Cu atom. A glycosyl phosphatidylinositol (GPI)-anchored form of ceruloplasmin is expressed by Sertoli cells, which may be the dominant form in Sertoli cells.

CHROMOSOMAL LOCATION

Genetic locus: CP (human) mapping to 3q24; Cp (mouse) mapping to 3 A2.

SOURCE

ceruloplasmin (H-60) is a rabbit polyclonal antibody raised against amino acids 121-180 mapping near the N-terminus of ceruloplasmin of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

ceruloplasmin (H-60) is recommended for detection of ceruloplasmin of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ceruloplasmin siRNA (h): sc-41194, ceruloplasmin siRNA (m): sc-41195, ceruloplasmin shRNA Plasmid (h): sc-41194-SH, ceruloplasmin shRNA Plasmid (m): sc-41195-SH, ceruloplasmin shRNA (h) Lentiviral Particles: sc-41194-V and ceruloplasmin shRNA (m) Lentiviral Particles: sc-41195-V.

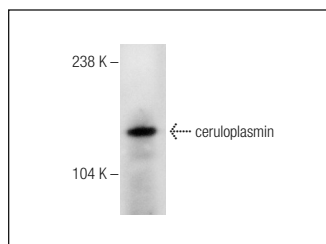
Molecular Weight of ceruloplasmin: 132 kDa.

Positive Controls: human plasma extract: sc-364374, NTERA-2 cl.D1 whole cell lysate: sc-364181 or SK-BR-3 cell lysate: sc-2218.

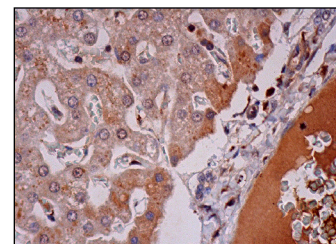
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



ceruloplasmin (H-60): sc-20957. Western blot analysis of ceruloplasmin in human plasma.



ceruloplasmin (H-60): sc-20957. Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining of hepatocytes and staining of plasma in blood vessels.

SELECT PRODUCT CITATIONS

1. Brown, D.R. 2004. Role of the prion protein in copper turnover in astrocytes. *Neurobiol. Dis.* 15: 534-543.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **ceruloplasmin (E-9): sc-365206** or **ceruloplasmin (H-3): sc-365205**, our highly recommended monoclonal alternatives to ceruloplasmin (H-60).