SANTA CRUZ BIOTECHNOLOGY, INC.

ceruloplasmin II (121-180): sc-4498 WB

BACKGROUND

Ceruloplasmin (CP) is a 132 kDa blue plasma glycoprotein that is synthesized in hepatocytes and transports copper throughout the body. CP 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. CP mRNAs are expressed in human liver, macrophages and lymphocytes. CP (also known as ferroxidase) binds copper and has six or seven cupric ions per molecule. CP is involved in peroxidation of Fe(II) transferrin to form Fe(III) transferrin. CP is proteolytically degraded to a 116 kDa form, which still possesses ferroxidase activity. However, only the intact 132 kDa form of CP is able to catalyze iron loading into ferrintin, which indicates that the structural integrity of CP is essential for the enzyme to effectively catalyze iron loading into ferrintin. CP also induces low density lipoprotein oxidation *in vitro,* which depends on the presence of a single, chelatable Cu atom. A 135 kDa glycosyl phosphatidylinositol (GPI)-anchored form of CP is expressed by Sertoli cells that may be the dominant form in Sertoli cells. The human CP gene maps to chromosome 3q23-q24.

REFERENCES

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SOURCE

ceruloplasmin (121-180) is expressed in *E. coli* as a 34 kDa tagged fusion protein corresponding to amino acids 121-180 of ceruloplasmin of human origin.

PRODUCT

ceruloplasmin (121-180) is purified from bacterial lysates (>98%) by glutathione agarose affinity chromatography; supplied as 10 µg in 0.1 ml SDS-PAGE loading buffer.

APPLICATIONS

ceruloplasmin (121-180) is suitable as a Western blotting control for sc-20957 and sc-21240.

STORAGE

Store at -20° C; stable for one year from the date of shipment.

RESEARCH USE

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