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Ferritin Human

Human Liver Ferritin
RCP0847

Product Overview

Name	Ferritin Human

Description

Human Liver Ferritin

Introduction

Ferritin is the main intracellular iron storage protein in prokaryotes and eukaryotes. Ferritin’s major functions are the storage of iron in a soluble and nontoxic state and its release in a controlled fashion. An iron-containing protein complex is found mostly in the intestinal mucosa, spleen, and liver. Ferritin is composed of 24 subunits of the heavy and light chains. Variation in ferritin subunit composition may influence the rates of iron uptake and release in different tissues. Defects in the light chain ferritin gene are linked to a number of neurodegenerative diseases and hyperferritinemia-cataract syndrome. The genes that encode the light and heavy chains are on located different chromosomes. The light chain genes are in chromosome region 19q13.3-q13.4 whilst those for the heavy chain are in chromosome region 11q12-q13. Ferritin is shaped like a hollow sphere, inside which the iron is stored in the Fe(III) oxidation state. The iron is integrated in the mineral ferrihydrite, [FeO(OH)]8[FeO(H2PO4)], which is attached to the inner wall of the sphere. To release iron once the body needs it, the iron must be altered from the Fe(III) to the Fe(II) oxidation state. Subsequently, the iron leaves through channels in the spherical structure. Therefore, the structure of ferritin is tremendously important for the protein's ability to store and release iron in a controlled mode. The amount of ferritin in the blood (serum ferritin level) is directly related to the amount of iron stored in the body. The body has a "buffer" against iron deficiency (if the blood has too little iron, ferritin can release more) and, to a lesser extent, iron overload (if the blood and tissues of the body have too much iron, ferritin can help store the excess iron).

Source

Human Liver.

Physical Appearance

Sterile Filtered brownish solution.

Formulation

The protein solution is in 0.05M TRIS buffer pH 7.5 containing 1.0M NaCl and 0.09% NaN3.

Stability

Human Ferritin should be stored at 2-8°C.

Purity

Greater than 96.0%.

Human Virus Test

Tissue sample tested and found negative for HIV-1 & 2 antibodies, Hepatatis B surface antigen, Syphilis RPR and Hepatatis C antibodies.

Precautions

Ferritin Human is for research use only and not for use in diagnostic or therapeutic procedures.