
Product Data Sheet

Product Name: Haptoglobin Human

Cat. No.: GP23613

Batch No.: 1

Product Data

Purity >98% Source Pooled human plasma.

Physical Appearance solid Shipping Condition Shipped at Room temp.

Synonyms Haptoglobin; HP; BP; HPA1S; MGC111141; HP2-ALPHA-2.

Solubility It is recommended to reconstitute the lyophilized Haptoglobin in sterile water not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

Formulation Lyophilized with no additives.

Introduction

Haptoglobin is a glycoprotein which is synthesized in the liver and circulates in the blood. Haptoglobin is produced typically by hepatocytes but also by other tissues: e.g. skin, lung, and kidney. It is a positive acute phase protein that binds free hemoglobin and removes it from the circulation to prevent kidney injury, and iron loss following hemolysis. The haptoglobin-hemoglobin complex is subsequently removed by the reticuloendothelial system (generally the spleen). As the reticuloendothelial system removes the haptoglobin-hemoglobin complex from the body, haptoglobin levels are reduced in hemolytic anaemias. In the course of binding hemoglobin, haptoglobin sequesters the iron inside hemoglobin, preventing iron-utilizing bacteria from benefitting from hemolysis. Haptoglobin consists of two a- and two b-chains, connected by disulfide bonds. Three major haptoglobin phenotypes are known to exist (Hp 1-1, Hp 2-1, and Hp 2-2). Hp 1-1 is biologically the most effective in binding free hemoglobin and suppressing inflammatory responses associated with free hemoglobin. Hp 2-2 is biologically the least active, and Hp 2-1 is moderately active. Haptoglobin's molecular mass ranges from 8-200 kDa. Reduced levels can be seen in haemolysis and impaired liver function. High levels are a marker for acute or chronic inflammation. Ahaptoglobinemia or hypohaptoglobinemia are caused by mutations in the haptoglobin gene and/or its regulatory regions. Haptoglobin is also linked to diabetic nephropathy, the incidence of

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coronary artery disease in type 1 diabetes, Crohn's disease, inflammatory disease behavior, primary sclerosing cholangitis, susceptibility to idiopathic Parkinson's disease, and a reduced incidence of Plasmodium falciparum malaria.

Stability

Human Haptoglobin although stable at room temperature for 3 weeks, should be stored desiccated below -18C. Upon reconstitution IL18 should be stored at 4C between 2-7 days and for future use below -18C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Background

Human Haptoglobin produced from pooled human plasma corresponding to the Mw of isotypes of Haptoglobin at 86kD and >200kD.

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