9051 Mira Mesa Blvd, #910094
San Diego, CA 92191
Tel: 760-390-3989

Haptoglobin

Haptoglobin Human Recombinant
RCP0990

Product Overview

Name	Haptoglobin
Description	
Haptoglobin Human Recombinant	
Accession (Primary)	P00738
Synonyms	
Haptoglobin, HP, BP, HPA1S, MGC111141, HP2-ALPHA-2.	
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 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.	
Source	
Escherichia Coli.	
Physical Appearance	
Sterile Filtered White lyophilized (freeze-dried) powder.	
Formulation	

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Each mg was lyophilized with 1xPBS, 0.4% SDS and 4mM DTT.

Stability

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

Purity

Greater than 90.0% as determined by SDS-PAGE.

Amino acid sequence

L ILGGHLDAKG SFPWQAKMVS HHNLTTGATL INEQWLLTTA KNLFLNHSEN ATAKDIAPTL TLYVGKKQLV EIEKVVLHPN YSQVDIGLIK LKQKVSVNER VMPICLPSKD YAEVGRVGYV SGWGRNANFK FTDHLKYVML PVADQDQCIR HYEGSTVPEK KTPKSPVGVQ PILNEHTFCA GMSKYQEDTC YGDAGSAFAV HDLEEDTWYA TGILSFDKSC AVAEYGVYVK VTSIQDWVQK TIAEN

Solubility

It is recommended to reconstitute the lyophilized Haptoglobin in sterile 18MΩ-cm H2O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Precautions

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

Target Information: (P00738)