



Product Datasheet

Product Name	Haptoglobin Human Recombinant
Cata No	CB501079
Source	<i>Escherichia Coli.</i>
Synonyms	Haptoglobin, HP, BP, HPA1S, MGC111141, HP2-ALPHA-2.

Description

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 α - and two β -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.

Haptoglobin Human Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing (aa. 145-405) fusion protein with His tag and having a total Mw of 33 kDa (4 kDa His-tag).

Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

Purity

Greater than 90.0% as determined by SDS-PAGE and HPLC.

Formulation

Each mg was lyophilized with 1xPBS, 0.1% SDS and 1mM DTT.

Reconstitution

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

Stability

Lyophilized Haptoglobin although stable at room temperature for 3 weeks, should be stored

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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.

Applications

1. Positive control for Western blot
2. Antibody production
3. Protein assay

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