Recombinant Human Haptoglobin His

Catalog No.	CRH104A	**Quantity:**	5 µg
	CRH104B		20 µg
	CRH104C		1.0 mg

Alternate Names: 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 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.
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).

Source: *E. coli*

Molecular Weight: 33 kDa (including a 4 kDa His-tag)

Formulation: Sterile filtered and then lyophilized with 1x PBS + 0.1% SDS +1 mM DTT.

Purity: Greater than 90.0% by SDS-PAGE and HPLC.

Endotoxin Level: <0.1 ng/µg of protein.

Reconstitution: **Centrifuge vial prior to opening**. First add sterile water to the vial to fully solubilize the protein to a concentration not less than 100 µg/ml. After complete solubilization of the protein, it can be further diluted to other aqueous solutions.

Storage & Stability: Lyophilized protein is stable at room temperature for 3 weeks, but it is recommended to store the lyophilized product desiccated at -20°C to -80°C. Upon reconstitution, protein should be stored at 2-4°C for one week and for future use at -20°C to -80°C. Add a carrier protein (0.1% HSA or BSA) as a stabilizer for long term storage. **Please note that the addition of any carrier protein into this product may produce unwanted**

endotoxin. This depends upon the particular application employed. Avoid repeated freeze-thaw cycles.

Applications:

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

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