

# Human haptoglobin - Purified plasmaprotein

Product information, P101, 050922 version A

## Storage and stability

Prior to reconstitution, store at 2-8 °C. After reconstitution, store aliquots at -20°C. If not reconstituted, store at 2-8 °C. Repeated freezing is not recommended. Haptoglobin (Hp) is a very stable protein and can be used under long periods of time.

<b>Pack size</b>	<b>Product number</b>
5 mg	P101

## Content info

Appearance: Lyophilized white powder	
Protein content: > 95 mass %	A <sub>280</sub>
Water content: ≤ 10 % by weight	ΔM -> Δ
Purity: > 95 %	SDS-PAGE (see figure 1)

## General information about haptoglobin

Hp is a plasma glycoprotein synthesized in the liver. High levels of Hp are found in inflammatory and neoplastic diseases. Hp stimulates angiogenesis, inhibits prostaglandin synthesis and promotes cholesterol crystallization. The most important biological function of Hp may be the strong binding to free hemoglobin (Hb) and transport to the liver for protein degradation and iron recycling [1]. Hp exists in three different phenotypes: Hp 1-1 (86 kDa), Hp 2-1 (120 kDa) and Hp 2-2 (160 kDa) respectively. The Hp concentration in plasma is type-dependent, with significantly higher mean plasma concentration for the Hp 1-1 phenotype. At least ten (10) different bands can be identified in the phenotypes Hp 2-1 and Hp 2-2 on a SDS-PAGE gel. The concentration of Hp in human plasma is ranging from 1.0 to 1.5 mg/ml [2].

## Product description

Purified Hp has many advantages and can be used in different assays and laboratory techniques such as ELISA, immunoelectrophoresis and immunoblottings. In above, it may be used as a reference antigen, standard or coating protein. Human Hp is isolated from normal, human plasma and purified with affinity chromatography and has more than 95 % purity. It is an essentially salt free lyophilized powder.

## Reconstitution

The product is delivered as a lyophilized powder which is essentially salt-free. Reconstitution should be done in a suitable buffer to a minimum concentration of 1 mg/ml. After reconstitution, protein concentration can be determined employing absorbance measurements at 280 nm or by a protein determination kit.

## Biohazard

Complete assurance that infectious agents are absent is not offered by any known test method. This product should be handled using the same safety precautions

employed when handling any potentially infectious material. Refer to MSDS (Material Safety Data Sheet). Source material has been tested and found negative for antibody to HIV (Human Immunodeficiency Virus), antibody to HCV (Hepatitis C Virus) and for HbsAG (Hepatitis B Surface Antigen).

## Precautions and Disclaimer

This product is only intended for laboratory use. It is not intended for use in drugs, households or other areas. It is non toxic.

## Technical service

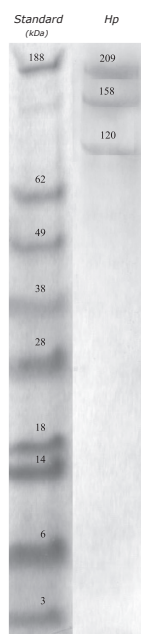
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**Figure 1.**  
SDS-PAGE with denaturing conditions on purified human Hp from pooled human plasma with molecular weight markers at 188, 62, 49, 38, 28, 18, 14, 6 and 3 kDa respectively. Visible bands at 209, 158 and 120 kDa represents the different isoforms (200, 150 and 120 kDa respectively) of the purified Hp product.

## References

[1] Cigliano L, Spagnuolo M, Abrescia P. Quantitative variations of the isoforms in haptoglobin 1-2 and 2-2 individual phenotypes. *Arch Biochem Biophys.* **416(2)** (2003) 227-37

[2] Liao C, Chang T, Pan J, Chen W, Mao J.T S. Purification of human plasma haptoglobin by hemoglobin-affinity column chromatography. *Journal of Chromatography B,* **790** (2003) 209-216