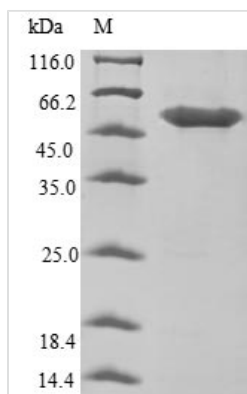




# Recombinant Human Haptoglobin (HP)

<b>Product Code</b>	CSB-EP010691HU
<b>Relevance</b>	As a result of hemolysis, hemoglobin is found to accumulate in the kidney and is secreted in the urine. Haptoglobin captures, and combines with free plasma hemoglobin to allow hepatic recycling of heme iron and to prevent kidney damage. Haptoglobin also acts as an Antimicrobial; Antioxidant, has antibacterial activity and plays a role in modulating many aspects of the acute phase response. Hemoglobin/haptoglobin complexes are rapidly cleared by the macrophage CD163 scavenger receptor expressed on the surface of liver Kupfer cells through an endocytic lysosomal degradation pathway.
<b>Abbreviation</b>	Recombinant Human HP protein
<b>Storage</b>	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
<b>Uniprot No.</b>	P00738
<b>Product Type</b>	Recombinant Protein
<b>Immunogen Species</b>	Homo sapiens (Human)
<b>Purity</b>	Greater than 85% as determined by SDS-PAGE.
<b>Sequence</b>	VDSGNDVTDIADDGCPKPPEIAHGYVEHSVRYQCKNYYKLRTEGDGVYTLND KKQWINKAVGDKLPECEADDGCPKPPEIAHGYVEHSVRYQCKNYYKLRTEGD GVYTLNNEKQWINKAVGDKLPECEAVCGKPKNPANPVQRILGGHLDAGKSFP WQAKMVSHHNLTTGATLINEQWLLTTAKNLFLNHSENATAKDIAPTLTLYVGKK QLVEIEKVVLHPNYSQVDIGLIKQKQKSVNERVMPICLPSKDYAEVGRVGYVS GWGRNANFKFTDHLKYVMLPVADQDQCIRHYEGSTVPEKKTPKSPVGVQPIL NEHTFCAGMSKYQEDTCYGDAGSAFAVHDLEEDTWYATGILSFDKSCAVAEY GVYVKVTSIQDWVQKTIEN
<b>Research Area</b>	Cardiovascular
<b>Source</b>	E.coli
<b>Target Names</b>	HP
<b>Protein Names</b>	Alternative name(s):Zonulin
<b>Expression Region</b>	19-406aa
<b>Notes</b>	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
<b>Tag Info</b>	N-terminal 6xHis-B2M-tagged
<b>Mol. Weight</b>	57.3 kDa
<b>Protein Length</b>	Full Length of Mature Protein
<b>Image</b>	



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

## Description

The region for expressing recombinant Human HP (Haptoglobin) contains amino acids 19-406. The expected molecular weight for the HP (Haptoglobin) protein is calculated to be 57.3 kDa. The HP (Haptoglobin) protein was expressed in e.coli. The HP (Haptoglobin) gene fragment has been modified by fusing the N-terminal 6xHis-B2M tag, providing convenience in detecting and purifying the recombinant HP (Haptoglobin) protein during the following stages.

Human haptoglobin (HP) is a glycoprotein primarily synthesized by the liver and released into the bloodstream. Haptoglobin mainly binds to free hemoglobin, released during the breakdown of red blood cells, preventing oxidative damage and facilitating its clearance by macrophages. This haptoglobin-hemoglobin complex is then efficiently removed from circulation, preventing the harmful effects of free hemoglobin. Beyond its role in hemoglobin scavenging, haptoglobin is involved in immunomodulation and inflammation, influencing processes like the acute-phase response. Additionally, genetic variations in haptoglobin exist, contributing to individual differences in susceptibility to certain diseases. Research on haptoglobin spans various medical fields, including hematology, immunology, and genetics, exploring its multifaceted functions and clinical relevance.

## Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL. We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

## Shelf Life

The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.