



# Recombinant Protein Technical Manual

## Recombinant Human Haptoglobin/Zonulin Protein (aa 145-406, His Tag) RPES0258

### Product Data:

**Product SKU:** RPES0258

**Size:** 10µg

**Species:** Human

**Expression host:** E. coli

**Uniprot:** P00738

### Protein Information:

**Molecular Mass:** 31.4 kDa

**AP Molecular Mass:** 35 kDa

**Tag:** N-6His

**Bio-activity:**

**Purity:** > 95 % as determined by reducing SDS-PAGE.

**Endotoxin:** < 1.0 EU per µg as determined by the LAL method.

**Storage:** Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

**Shipping:** This product is provided as lyophilized powder which is shipped with ice packs.

**Formulation:** Lyophilized from a 0.2 µm filtered solution of PBS, 1mM DTT, pH 7.4.

**Reconstitution:** Please refer to the printed manual for detailed information.

**Application:**

**Synonyms:** Haptoglobin; Zonulin; HP

## Immunogen Information:

**Sequence:** Cys145-Asn406

## Background:

Haptoglobin(HP) is a secreted protein which is a member of the peptidase S1 family of serine proteases. 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. Uncleaved haptoglobin, also known as zonulin, plays a role in intestinal permeability, allowing intercellular tight junction disassembly, and controlling the equilibrium between tolerance and immunity to non-self antigens.