

## Haptoglobin Protein, Human (HEK293, His)

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| <b>Cat. No.:</b>         | HY-P70230  |
| <b>Synonyms:</b>         | rHuHaptoglobin/HP, His; Haptoglobin; Zonulin; HP     |
| <b>Species:</b>          | Human  |
| <b>Source:</b>           | HEK293   |
| <b>Accession:</b>        | P00738 (V19-Q160(alpha chain)&I162-N406(beta chain)) |
| <b>Gene ID:</b>          | 3240   |
| <b>Molecular Weight:</b> | 16&40-75 kDa   |

### PROPERTIES

|                                |  |
|--------------------------------|--|
| <b>AA Sequence</b>             | <pre>V D S G N D V T D I   A D D G C P K P P E   I A H G Y V E H S V   R Y Q C K N Y Y K L R T E G D G V Y T L   N D K K Q W I N K A   V G D K L P E C E A   D D G C P K P P E I A H G Y V E H S V R   Y Q C K N Y Y K L R   T E G D G V Y T L N   N E K Q W I N K A V G D K L P E C E A V   C G K P K N P A N P   V Q &amp; I L G G H L D   A K G S F P W Q A K M V S H H N L T T G   A T L I N E Q W L L   T T A K N L F L N H   S E N A T A K D I A P T L T L Y V G K K   Q L V E I E K V V L   H P N Y S Q V D I G   L I K L K Q K V S V N E R V M P I C L P   S K D Y A E V G R V   G Y V S G W G R N A   N F K F T D H L K Y V M L P V A D Q D Q   C I R H Y E G S T V   P E K K T P K S P V   G V Q P I L N E H T F C A G M S K Y Q E   D T C Y G D A G S A   F A V H D L E E D T   W Y A T G I L S F D K S C A V A E Y G V   Y V K V T S I Q D W   V Q K T I A E N</pre> |
| <b>Appearance</b>              | Lyophilized powder.  |
| <b>Formulation</b>             | Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.  |
| <b>Endotoxin Level</b>         | <1 EU/µg, determined by LAL method.  |
| <b>Reconstitution</b>          | It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).  |
| <b>Storage &amp; Stability</b> | Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.   |
| <b>Shipping</b>                | Room temperature in continental US; may vary elsewhere.  |

### DESCRIPTION

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| <b>Background</b> | The Haptoglobin protein functions to capture and bind free plasma hemoglobin, preventing kidney damage and enabling hepatic recycling of heme iron. During hemolysis, hemoglobin can accumulate in the kidneys and be secreted in urine. |
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Additionally, Haptoglobin acts as an antioxidant, exhibits antibacterial activity, and plays a role in modulating various aspects of the acute phase response. The complexes formed between hemoglobin and Haptoglobin are efficiently cleared by the macrophage CD163 scavenger receptor on liver Kupfer cells through an endocytic lysosomal degradation pathway. Notably, the uncleaved form of the alpha-2 allele (2-2), known as zonulin, has implications in intestinal permeability by regulating intercellular tight junction disassembly and influencing the balance between tolerance and immunity to non-self antigens.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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