# HO-1 Protein, Human

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| **Cat. No.:** | HY-P70276 |
| **Synonyms:** | rHuHeme oxygenase 1/HO-1; Heme Oxygenase 1; HO-1; HMOX1; HO; HO1 |
| **Species:** | Human |
| **Source:** | E. coli |
| **Accession:** | P09601 (M1-T261) |
| **Gene ID:** | 3162 |
| **Molecular Weight:** | Approximately 30.0 kDa |

## PROPERTIES

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| **AA Sequence** | M E R P Q P D S M P Q D L S E A L K E A T K E V H T Q A E N A E F M R N F Q K G<br>Q V T R D G F K L V M A S L Y H I Y V A L E E E I E R N K E S P V F A P V Y F P<br>E E L H R K A A L E Q D L A F W Y G P R W Q E V I P Y T P A M Q R Y V K R L H E<br>V G R T E P E L L V A H A Y T R Y L G D L S G G Q V L K K I A Q K A L D L P S S<br>G E G L A F F T F P N I A S A T K F K Q L Y R S R M N S L E M T P A V R Q R V I<br>E E A K T A F L L N I Q L F E E L Q E L L T H D T K D Q S P S R A P G L R Q R A<br>S N K V Q D S A P V E T P R G K P P L N T |
| **Biological Activity** | The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet. |
| **Appearance** | Solution. |
| **Formulation** | Supplied as a 0.2 μm filtered solution of 20 mM PB, 150 mM NaCl, 1 mM EDTA, pH 7.4. |
| **Endotoxin Level** | <1 EU/μg, determined by LAL method. |
| **Reconsititution** | N/A |
| **Storage & Stability** | Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles. |
| **Shipping** | Shipping with dry ice. |

## DESCRIPTION

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| **Background** | The HO-1 protein serves as a catalyst for the oxidative cleavage of heme at the alpha-methene bridge carbon, resulting in the release of carbon monoxide (CO) and the generation of biliverdin IXalpha, while concurrently releasing the central heme iron chelate as ferrous iron. This process has been extensively documented in various publications. Moreover, HO-1 protein plays a crucial role in safeguarding against programmed cell death by catabolizing free heme, thereby preventing its ability |

to sensitize cells and induce apoptosis. Numerous studies have affirmed the cytoprotective effect of HO-1 protein. Additionally, in the context of microbial infection, it has been observed that during SARS-CoV-2 infection, HO-1 protein promotes SARS-CoV-2 ORF3A-mediated autophagy, although it is not deemed necessary for the induction of reticulophagy by ORF3A.

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

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