HO-2/HMOX2 Protein, Human (His)

Cat. No.:	HY-P79126
Synonyms:	HMOX2; HO-2; HO2; Heme Oxygenase 2
Species:	Human
Source:	E. coli
Accession:	P30519 (S2-L291)
Gene ID:	3163
Molecular Weight:	Approximately 31 & 35 kDa

PROPERTIES

AA Sequence	S A E V E T S E G V D E S E K K N S G A L E K E N Q M R M A D L S E L L K E G T K E A H D R A E N T Q F V K D F L K G N I K K E L F K L A T T A L Y F T Y S A L E E E M E R N K D H P A F A P L Y F P M E L H R K E A L T K D M E Y F F G E N W E E Q V Q C P K A A Q K Y V E R I H Y I G Q N E P E L L V A H A Y T R Y M G D L S G G Q V L K K V A Q R A L K L P S T G E G T Q F Y L F E N V D N A Q Q F K Q L Y R A R M N A L D L N M K T K E R I V E E A N K A F E Y N M Q I F N E L D Q A G S T L A R E T L E D G F P V H D G K G D M R K C P F Y A A E Q D K G A L E G S S C P F R T A M A V L
Biological Activity	Measured by its ability to oxidize hemin to biliverdin. The specific activity is >3.5 pmol/min/μg.
Appearance	Solution.
Formulation	Supplied as a 0.2 μm filtered solution of 50 mM Tris-HCL, 300 mM NaCl, 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

Background	Heme oxygenase-2 (HO-2), encoded by the HMOX2 gene, is a critical enzyme that catalyzes 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. Simultaneously, the enzyme liberates the central heme iron chelate as ferrous iron. This reaction represents a pivotal step in

heme catabolism and serves as a regulatory mechanism for maintaining cellular heme homeostasis. The release of carbon monoxide and biliverdin, along with the liberation of ferrous iron, underscores the multifunctional role of HO-2 in both gasotransmitter signaling and the recycling of iron. The enzymatic activity of HO-2 is essential for various physiological processes, including antioxidant defense, anti-inflammatory responses, and the regulation of vascular tone.

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