PRODUCT INFORMATION

HO-2 (human recombinant)

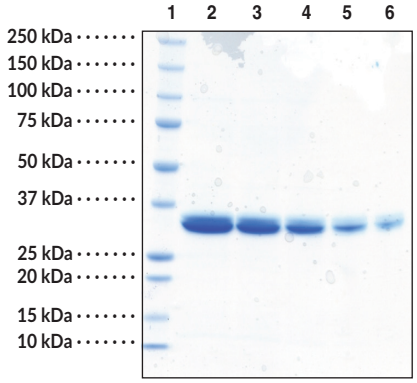
Item No. 22732

Overview and Properties

Synonyms: EC:1.14.14.18, Heme oxygenase 2, HMOX2
Source: N-terminal His-tagged HO-2/HMOX2 human recombinant protein purified from *E. coli*
Amino Acids: 2-264
Uniprot No.: P30519
Molecular Weight: 32.6 kDa
Storage: -80°C (as supplied); avoid freeze/thaw cycles by storing protein in aliquots
Stability: ≥1 year
Purity: ***batch specific*** (≥90% estimated by SDS-PAGE)
Supplied in: 50 mM HEPES, pH 8.0, 150 mM sodium chloride
Protein Concentration: ***batch specific*** mg/ml

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Image



Lane 1: MW Markers
Lane 2: HO-2 (8 µg)
Lane 3: HO-2 (6 µg)
Lane 4: HO-2 (4 µg)
Lane 5: HO-2 (2 µg)
Lane 6: HO-2 (1 µg)
Representative gel image shown; actual purity may vary between each batch.

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Description

Heme oxygenase-2 (HO-2) is a constitutively active heme oxygenase encoded by the *HMOX2* gene.[1,2] It is a membrane-bound enzyme that catalyzes the cleavage of heme to give carbon monoxide (CO), ferrous ions (Fe^{2+}), and biliverdin, with biliverdin being further processed into bilirubin. HO-2 is found in neurons, testes, and endothelial and smooth muscle cells from cerebral vessels.2 HO-2 protects against apoptotic neuronal cell death in models of ischemic injury and oxidative stress. It also acts as an oxygen sensor to inhibit systemic vascular reactivity and reduce cell death in response to hypoxia.

References

1. Maines, M.D. The heme oxygenase system: A regulator of second messenger gases. *Annu. Rev. Pharmacol. Toxicol.* **37**, 517-554 (1997).
2. Muñoz-Sánchez, J. and Chánez-Cárdenas, M.E. A review on hemeoxygenase-2: Focus on cellular protection and oxygen response. *Oxid. Med. Cell. Longev.* **604981**, (2014).

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