HO-1 (human), (recombinant)

Heme Oxygenase-1 (HO-1) also known as Hsp32, is the inducible isoform of heme oxygenase that catalyzes the NADPH, oxygen, and cytochrome P450 reductase dependent oxidation of heme to carbon monoxide, ferrous iron and biliverdin which is rapidly reduced to bilirubin. These products of the HO reaction have important physiological effects: carbon monoxide is a potent vasodilator and has been implicated to be a physiological regulator of cGMP and vascular tone; biliverdin and its product bilirubin are potent antioxidants; "free" iron increases oxidative stress and regulates the expression of many mRNAs (e.g., DCT-1, ferritin and transferring receptor) by affecting the conformation of iron regulatory protein (IRP)-1 and its binding to iron regulatory elements (IREs) in the 5'- or 3'- UTRs of the mRNAs. To date, three identified heme oxygenase isoforms are part of the HO system that catalyze heme into biliverdin and carbon monoxide. These are inducible HO-1 or Hsp32, constitutive HO-2 that is abundant in the brain and testis, and HO-3 which is related to HO-2 but is the product of a different gene. The HO system is the rate-limiting step in heme degradation and HO activity decreases the levels of heme which is a well known potent catalyst of lipid peroxidation and oxygen radical formation.

Citations: 2 View Online »

Ordering Information

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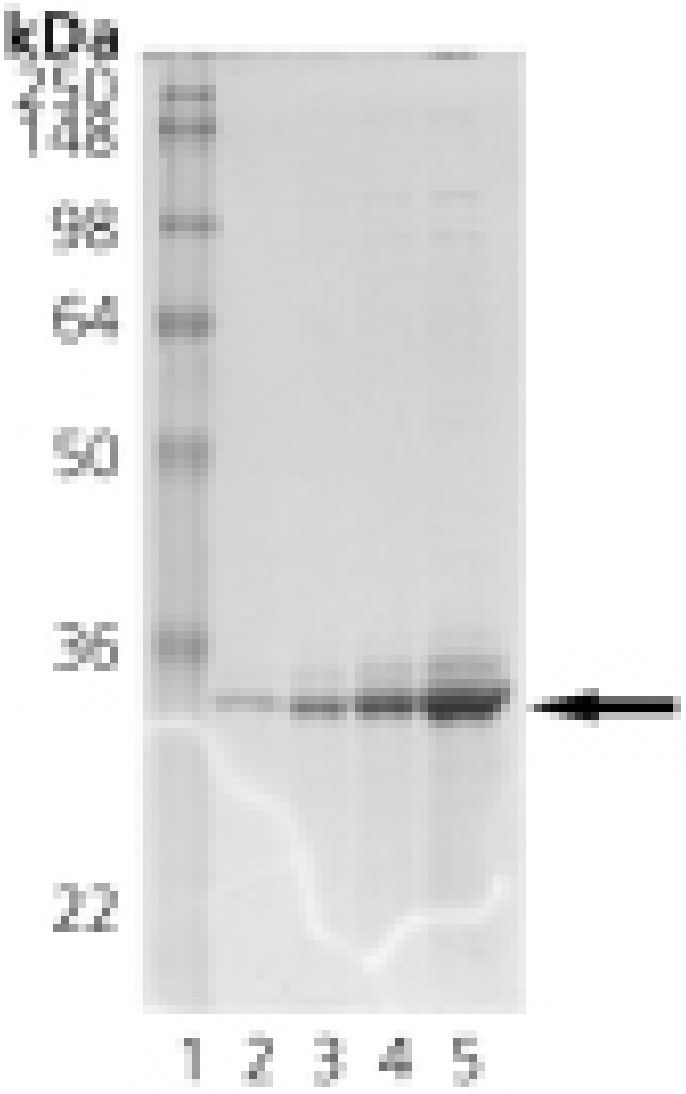
ADI-SPP-732-D	50µg
ADI-SPP-732-F	200µg

Manuals, SDS & CofA

View Online »



SDS-PAGE analysis of Prod. No. ADI-SPP-732: Lane 1: MWM, Lane 2: 0.5µg; Lane 3: 1µg; Lane 4: 2µg; Lane 5: 5µg of Prod. No. ADI-SPP-732 detected by Coomassie stain.

Western Blot analysis of Prod. No. ADI-SPP-732: Lane 1: MW marker; Lane 2: 100 ng of Prod. No. ADI-SPP-732 probed with Prod. No. ADI-OSA-110 at 1:1000 dilution.

Handling & Storage

Long Term Storage	-80°C
Shipping	Dry Ice

Regulatory Status

RUO - Research Use Only

Product Details

Alternative Name	HMOX1, HSP32, Heat shock protein 32, Heme oxygenase 1
Application Notes	Western blot control.
Formulation	Liquid. In 50mM TRIS-HCl, pH 7.5, containing 2% glycerol, 450mM sodium chloride, 1mM DTT, and 0.1mM PMSF.
MW	~32kDa
Purity	≥90% (SDS-PAGE; Western blot)
Purity Detail	Purified by multi-step chromatography.
Source	Produced in *E. coli*.
UniProt ID	P09601

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