**BACKGROUND**

Heme Oxygenases are microsomal enzymes that cleave heme to produce the antioxidant biliverdin, inorganic iron and carbon monoxide (CO). The activity of Heme Oxygenase 1 (HO-1), also designated HSP 32, is highly inducible in response to numerous stimuli, including heme, heavy metals, hormones and oxidative stress. Heme Oxygenase 2, in contrast, appears to be constitutively expressed in mammalian tissues. Heme Oxygenase 2 is involved in the production of carbon monoxide (CO) in brain, where CO is thought to act as a neurotransmitter. The CO signaling system closely parallels the signaling pathway involving nitric oxide, and regulation of the two systems is closely linked. Heme Oxygenase 3 is found in the spleen, liver, thymus, prostate, heart, kidney, brain and testis. A poor Heme catalyst, Heme Oxygenase 3 has two heme regulatory motifs that may be involved in Heme binding.

**CHROMOSOMAL LOCATION**

Genetic locus: HMOX1 (human) mapping to 22q12.3.

**SOURCE**

Heme Oxygenase 1 (A-3) is a mouse monoclonal antibody raised against amino acids 184-288 of Heme Oxygenase 1 of human origin.

**PRODUCT**

Each vial contains 200 µg IgG1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Heme Oxygenase 1 (A-3) is available conjugated to agarose (sc-136960 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-136960 HRP), 200 µg/ml, for WB, (HCO) and ELISA; to either phycoerythrin (sc-136960 PE), fluorescein (sc-136960 FITC), Alexa Fluor ® 488 (sc-136960 AF488), Alexa Fluor® 546 (sc-136960 AF546), Alexa Fluor® 594 (sc-136960 AF594) or Alexa Fluor® 647 (sc-136960 AF647), 200 µg/ml, for WB (RGB), IF, HCO and FCM; and to either Alexa Fluor® 680 (sc-136960 AF680) or Alexa Fluor® 790 (sc-136960 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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**APPLICATIONS**

Heme Oxygenase 1 (A-3) is recommended for detection of Heme Oxygenase 1 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Heme Oxygenase 1 siRNA (h): sc-35554, Heme Oxygenase 1 shRNA Plasmid (h): sc-35554-SH and Heme Oxygenase 1 shRNA (h) Lentiviral Particles: sc-35554-V.

Molecular Weight of Heme Oxygenase 1: 32 kDa.


**STORAGE**

Store at 4°C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**DATA**

![Heme Oxygenase 1 (A-3): sc-136960. Western blot analysis of Heme Oxygenase 1 expression in human spleen tissue extract (A) and SW-13 whole cell lysate (B).](image)

![Heme Oxygenase 1 (A-3): sc-136960. Immunofluorescence staining of formalin-fixed Hep G2 cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic and perinuclear staining of glandular cells (B).](image)

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

For research use only, not for use in diagnostic procedures.