**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 LOCALIZATION**

Genetic locus: HMOX1 (human) mapping to 22q12.3; Hmox1 (mouse) mapping to 8 C1.

**SOURCE**

Heme Oxygenase 1 (H-105) is a rabbit polyclonal antibody raised against amino acids 184-288 of Heme Oxygenase 1 of human origin.

**PRODUCT**

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

**APPLICATIONS**

Heme Oxygenase 1 (H-105) is recommended for detection of Heme Oxygenase 1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1,000), 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) 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 siRNA (m): sc-35555, Heme Oxygenase 1 shRNA Plasmid (h): sc-35554-SH, Heme Oxygenase 1 shRNA Plasmid (m): sc-35555-SH, Heme Oxygenase 1 shRNA (h) Lentiviral Particles: sc-35554-V and Heme Oxygenase 1 shRNA (m) Lentiviral Particles: sc-35555-V.

Molecular Weight of Heme Oxygenase 1: 32 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, rat spleen extract: sc-2397 or Heme Oxygenase 1 (m): 293T whole cell lysate: sc-120745.

**STORAGE**

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

**PROTOCOLS**

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

**RESEARCH USE**

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

**DATA**

Heme Oxygenase 1 (H-105): sc-10789. Western blot analysis of Heme Oxygenase 1 expression in non-transfected: sc-117752 (A) and mouse Heme Oxygenase 1 transfected: sc-120745 (B) 293T whole cell lysates.

Heme Oxygenase 1 (H-105): sc-10789. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

**SELECT PRODUCT CITATIONS**