

Heme Oxygenase 3 (N-20): sc-12310

BACKGROUND

Heme oxygenases are microsomal enzymes that cleave heme to produce the antioxidant biliverdin, inorganic iron, and carbon monoxide (CO). Heme oxygenase 1 (HO-1, also designated HSP 32) activity is highly inducible in response to numerous stimuli, including heme, heavy metals, hormones and oxidative stress. HO-2, in contrast, appears to be constitutively expressed in mammalian tissues. HO-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.

REFERENCES

1. Maines, M.D. 1988. Heme oxygenase: function, multiplicity, regulatory mechanisms, and clinical applications. *FASEB J.* 2: 2557-2568.
2. Rodgers, P.A. and Stevenson, D.K. 1990. Developmental biology of heme oxygenase. *Clin. Perinatol.* 17: 275-291.
3. Alam, J., Cai, J. and Smith, A. 1994. Isolation and characterization of the mouse heme oxygenase-1 gene. Distal 5' sequences are required for induction by heme or heavy metals. *J. Biol. Chem.* 269: 1001-1009.
4. Maines, M.D. 1997. The heme oxygenase system; a regulator of second messenger gases. *Annu. Rev. Pharmacol. Toxicol.* 37: 517-554.
5. Snyder, S.H., et al. 1998. Nitric oxide and carbon monoxide: parallel roles as neural messengers. *Brain Res. Brain Res. Rev.* 26: 167-175.
6. Motterlini, R., et al. 1998. Heme oxygenase-1-derived carbon monoxide contributes to the suppression of acute hypertensive responses *in vivo*. *Circ. Res.* 83: 568-577.

SOURCE

Heme Oxygenase 3 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Heme Oxygenase 3 of rat origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-12310 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Heme Oxygenase 3 (N-20) is recommended for detection of Heme Oxygenase 3 of mouse and rat origin by Western Blotting (starting dilution 1:200, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

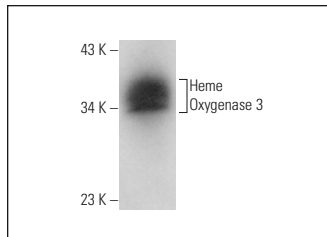
Molecular Weight of Heme Oxygenase 3: 33 kDa.

Positive Controls: rat kidney extract: sc-2394.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Heme Oxygenase 3 (N-20): sc-12310. Western blot analysis of Heme Oxygenase 3 expression in rat kidney tissue extract.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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


 MONOS
Satisfaction
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Try **Heme Oxygenase 2/3 (A-3): sc-166342**, our highly recommended monoclonal alternative to Heme Oxygenase 3 (N-20).