

# Haptoglobin $\alpha$ (M-80): sc-134466

## BACKGROUND

Haptoglobin (Hp) is a blood plasma protein that functions to bind free hemoglobin that has been released from erythrocytes, thereby inhibiting its oxidative activity. During this process, Haptoglobin sequesters the iron within hemoglobin, preventing iron-utilizing bacteria from benefitting from hemolysis. This function suggests that Haptoglobin concentrations may increase in response to inflammation. The resulting Haptoglobin-hemoglobin complex is then removed by the reticulo-endothelial system. Due to cleavage of a common precursor protein during protein synthesis, Haptoglobin consists of two  $\alpha$  and two  $\beta$  chains, connected by disulfide bridges. In human, Haptoglobin exists in two allelic forms designated Haptoglobin 1 (Hp1) and Haptoglobin 2 (Hp2), where Hp2 is the result of a partial Hp1 gene duplication. There are three known phenotypes of human Haptoglobin: Hp1-1, Hp2-1 and Hp2-2, which may be associated with diabetes and cardiovascular disease pathology and a susceptibility to Parkinson's and Crohn's disease. Haptoglobin levels are useful in diagnosing hemolytic anemia, the abnormal breakdown of red blood cells. Haptoglobin is expressed in mammalian hepatocytes as well as other tissues such as skin, lung and kidney.

## REFERENCES

1. Suleiman, M., et al. 2005. Haptoglobin polymorphism predicts 30-day mortality and heart failure in patients with diabetes and acute myocardial infarction. *Diabetes* 54: 2802-2806.
2. Na, N., et al. 2005. Serum free hemoglobin concentrations in healthy individuals are related to Haptoglobin type. *Clin. Chem.* 51: 1754-1755.
3. Yerbury, J.J., et al. 2005. The acute phase protein Haptoglobin is a mammalian extracellular chaperone with an action similar to clusterin. *Biochemistry* 44: 10914-10925.
4. Mihailovic, M., et al. 2005. Acute-phase related binding ability of p53 for the hormone response element of the Haptoglobin gene in adult rats. *Cell Biol. Int.* 29: 968-970.
5. Sharpe-Timms, K.L., et al. 2005. Haptoglobin expression by shed endometrial tissue fragments found in peritoneal fluid. *Fertil. Steril.* 84: 22-30.

## CHROMOSOMAL LOCATION

Genetic locus: HP (human) mapping to 16q22.2; Hp (mouse) mapping to 8 D3.

## SOURCE

Haptoglobin  $\alpha$  (M-80) is a rabbit polyclonal antibody raised against amino acids 21-100 mapping near the N-terminus of Haptoglobin of mouse origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

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

## APPLICATIONS

Haptoglobin  $\alpha$  (M-80) is recommended for detection of Haptoglobin  $\alpha$  of mouse, rat and, to a lesser extent, human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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); also recommended for detection of Haptoglobin-related protein (HRP) of human origin.

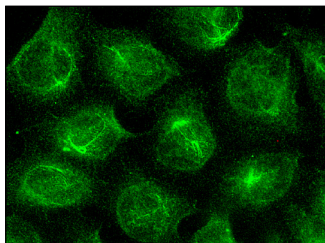
Suitable for use as control antibody for Haptoglobin siRNA (h): sc-72093, Haptoglobin siRNA (m): sc-72094, Haptoglobin shRNA Plasmid (h): sc-72093-SH, Haptoglobin shRNA Plasmid (m): sc-72094-SH, Haptoglobin shRNA (h) Lentiviral Particles: sc-72093-V and Haptoglobin shRNA (m) Lentiviral Particles: sc-72094-V.

Molecular Weight of Haptoglobin  $\alpha$  chains: 9-18 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



Haptoglobin  $\alpha$  (M-80): sc-134466. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization.

## RESEARCH USE

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

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Try **Haptoglobin  $\alpha$  (B-2): sc-365396** or **Haptoglobin  $\alpha$  (C-8): sc-376893**, our highly recommended monoclonal alternatives to Haptoglobin  $\alpha$  (M-80).