

# Haptoglobin (N-14): sc-68667

## BACKGROUND

Haptoglobin 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 reticuloendothelial system. Haptoglobin consists of two  $\alpha$  and two  $\beta$  chains, connected by disulfide bridges. 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. Ship, N.J., et al. 2005. Binding of acellular, native and cross-linked human hemoglobins to Haptoglobin: enhanced distribution and clearance in the rat. *Am. J. Physiol. Gastrointest. Liver Physiol.* 288: G1301-1309.
6. Sharpe-Timms, K.L., et al. 2005. Haptoglobin expression by shed endometrial tissue fragments found in peritoneal fluid. *Fertil. Steril.* 84: 22-30.
7. Dinic, S., et al. 2005. C/EBP  $\alpha$  and C/EBP  $\beta$  regulate Haptoglobin gene expression during rat liver development and the acute-phase response. *Mol. Biol. Rep.* 32: 141-147.
8. Sorensen, L.B., et al. 2005. Effect of sucrose on inflammatory markers in overweight humans. *Am. J. Clin. Nutr.* 82: 421-427.
9. Levy, A.P., et al. 2005. Haptoglobin phenotype, sleep-disordered breathing and the prevalence of cardiovascular disease: the sleep heart health study. *Sleep* 28: 207-213.

## CHROMOSOMAL LOCATION

Genetic locus: HP (human) mapping to 16q22.1; Hp (mouse) mapping to 8 D3.

## SOURCE

Haptoglobin (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Haptoglobin of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-68667 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Haptoglobin (N-14) is recommended for detection of Haptoglobin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 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  $\alpha$  subunit: 15-18 kDa.

Molecular Weight of Haptoglobin  $\beta$  subunit: 45 kDa.

## 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) 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.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **Haptoglobin (2F4): sc-69783**, our highly recommended monoclonal alternative to Haptoglobin (N-14).