

Haptoglobin α (C-8): sc-376893

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 α and two β 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.

CHROMOSOMAL LOCATION

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

SOURCE

Haptoglobin α (C-8) is a mouse monoclonal antibody raised against amino acids 21-100 mapping near the N-terminus of Haptoglobin of mouse origin.

PRODUCT

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

Haptoglobin α (C-8) is available conjugated to agarose (sc-376893 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376893 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376893 PE), fluorescein (sc-376893 FITC), Alexa Fluor[®] 488 (sc-376893 AF488), Alexa Fluor[®] 546 (sc-376893 AF546), Alexa Fluor[®] 594 (sc-376893 AF594) or Alexa Fluor[®] 647 (sc-376893 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-376893 AF680) or Alexa Fluor[®] 790 (sc-376893 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

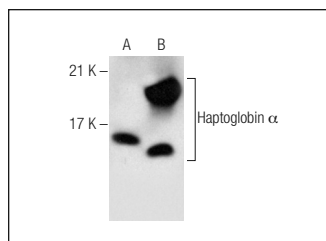
Haptoglobin α (C-8) is recommended for detection of Haptoglobin α of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, 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 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.

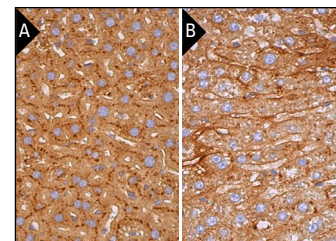
Molecular Weight of Haptoglobin α chains: 9-18 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or Hep G2 cell lysate: sc-2227.

DATA



Haptoglobin α (C-8): sc-376893. Western blot analysis of Haptoglobin α expression in HeLa (A) and Hep G2 (B) whole cell lysates.



Haptoglobin α (C-8): sc-376893. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse liver (A) and rat liver (B) tissue showing cytoplasmic and membrane staining of hepatocytes.

SELECT PRODUCT CITATIONS

1. Naryzhny, S., et al. 2022. Construction of 2DE patterns of plasma proteins: aspect of potential tumor markers. *Int. J. Mol. Sci.* 23: 11113.

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 for detailed protocols and support products.

Alexa Fluor[®] is a trademark of Molecular Probes, Inc., Oregon, USA