

Haptoglobin α (B-2): sc-365396

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/HRP (human) mapping to 16q22.2.

SOURCE

Haptoglobin α (B-2) is a mouse monoclonal antibody raised against amino acids 21-150 mapping near the N-terminus of Haptoglobin of human 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 (B-2) is available conjugated to agarose (sc-365396 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365396 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365396 PE), fluorescein (sc-365396 FITC), Alexa Fluor[®] 488 (sc-365396 AF488), Alexa Fluor[®] 546 (sc-365396 AF546), Alexa Fluor[®] 594 (sc-365396 AF594) or Alexa Fluor[®] 647 (sc-365396 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-365396 AF680) or Alexa Fluor[®] 790 (sc-365396 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

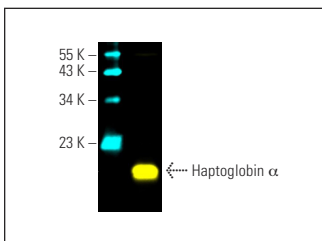
Haptoglobin α (B-2) is recommended for detection of Haptoglobin α and Haptoglobin-related protein of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting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

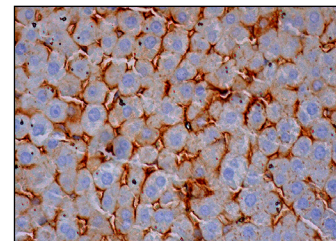
Molecular Weight of Haptoglobin α chains: 9-18 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

DATA



Haptoglobin α (B-2) Alexa Fluor[®] 488: sc-365396 AF488. Direct fluorescent western blot analysis of Haptoglobin α expression in human liver tissue extract. Blocked with UltraCruz[®] Blocking Reagent: sc-516214. Cruz Marker[™] Molecular Weight Standards detected with Cruz Marker[™] MW Tag-Alexa Fluor[®] 647: sc-516791.



Haptoglobin α (B-2): sc-365396. Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing membrane staining of hepatocytes and membrane and cytoplasmic staining of hepatic sinusoids.

SELECT PRODUCT CITATIONS

1. Luczak, M., et al. 2011. Chronic kidney disease-related atherosclerosis—proteomic studies of blood plasma. *Proteome Sci.* 9: 25.
2. Leecharoenkiat, K., et al. 2014. Comparative plasma protein profiling of hemoglobin H disease. *Dis. Markers* 2014: 340214.

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.

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