

Haptoglobin β (F-8): sc-390962

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.

CHROMOSOMAL LOCATION

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

SOURCE

Haptoglobin β (F-8) is a mouse monoclonal antibody raised against amino acids 181-260 mapping within an internal region 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 β (F-8) is available conjugated to agarose (sc-390962 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390962 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390962 PE), fluorescein (sc-390962 FITC), Alexa Fluor[®] 488 (sc-390962 AF488), Alexa Fluor[®] 546 (sc-390962 AF546), Alexa Fluor[®] 594 (sc-390962 AF594) or Alexa Fluor[®] 647 (sc-390962 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-390962 AF680) or Alexa Fluor[®] 790 (sc-390962 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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RESEARCH USE

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

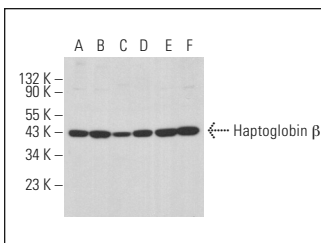
APPLICATIONS

Haptoglobin β (F-8) is recommended for detection of Haptoglobin β and HPR 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).

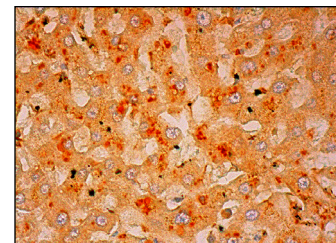
Molecular Weight of Haptoglobin β : 45 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, c4 whole cell lysate: sc-364186 or BYDP whole cell lysate: sc-364368.

DATA



Haptoglobin β (F-8): sc-390962. Western blot analysis of Haptoglobin β expression in Hep G2 (A), MCF7 (B), SK-BR-3 (C), BYDP (D), c4 (E) and NIH/3T3 (F) whole cell lysates.



Haptoglobin β (F-8): sc-390962. Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining of hepatocytes.

SELECT PRODUCT CITATIONS

1. Zhang, Z., et al. 2019. TLR4 counteracts BVRA signaling in human leukocytes via differential regulation of AMPK, mTORC1 and mTORC2. *Sci. Rep.* 9: 7020.
2. Naryzhny, S., et al. 2021. Evaluation of haptoglobin and its proteoforms as glioblastoma markers. *Int. J. Mol. Sci.* 22: 6533.
3. Naryzhny, S., et al. 2022. Construction of 2DE patterns of plasma proteins: aspect of potential tumor markers. *Int. J. Mol. Sci.* 23: 11113.

STORAGES

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

PROTOCOLS

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