**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 Haptoglobin1 (Hp1) and Haptoglobin2 (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**


**CHROMOSOMAL LOCATION**

Genetic locus: HP/HPR (human) mapping to 16q22.2.

**SOURCE**

Haptoglobin α (E-9) is a mouse monoclonal antibody raised against amino acids 21-150 mapping near the N-terminus of Haptoglobin of human origin.

**RESEARCH USE**

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

**PRODUCT**

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

**APPLICATIONS**

Haptoglobin α (E-9) is recommended for detection of Haptoglobin α and Haptoglobin-related protein of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:10000), immunoprecipitation [1-2 µg per 100-500 µg 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).

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

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

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

**DATA**

![Haptoglobin α (E-9): Western blot analysis](image)

**STORAGE**

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.