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ProductInformation

MONOCLONAL ANTI-HUMAN HAPTOGLOBIN
CLONE HG-36
Mouse Ascites Fluid

Product No. **H 6395**

Product Description

Monoclonal anti-Human Haptoglobin (mouse IgG1 isotype) is derived from the hybridoma produced by the fusion of mouse myeloma cells and splenocytes from an immunized mouse. Purified haptoglobin from pooled human plasma (containing the three major haplotypes) was used as the immunogen. The isotype is determined by a double diffusion assay using immunoglobulin and subclass specific antisera.

Monoclonal anti-Human Haptoglobin reacts with the three types of human haptoglobin (types 1-1, 2-1, and 2-2). In an ELISA, the antibody recognizes human haptoglobin as the purified antigen, in human serum, when complexed with human hemoglobin or captured by antibodies. In a competitive ELISA it does not cross react with human IgG, transferrin, C-reactive protein, α-1-acid glycoprotein, albumin or hemoglobin, nor with bovine, goat or sheep serum. The antibody reacts against native and denatured (non-reduced) human haptoglobin in an immunoblot or dot blot but fails to recognize the different haptoglobin types under reducing conditions.

Monoclonal anti-Human Haptoglobin is a useful tool for the detection, quantitation and purification of haptoglobin in biological fluids and for blood-stain grouping by applying various immunochemical techniques.

Haptoglobin is a serum α_2-glycoprotein that exists as a tetramer, composed of two smaller identical alpha (α) chains and two larger identical beta (β) chains. The α-chains are linked to each other by a disulfide bond and each β-chain is similarly linked to an α-chain.

Plasma haptoglobin is structurally similar to serum immunoglobulins. Normal adult plasma contains at least three different haplotypes; based on their differences in light alpha subunit structure: Type 1-1 and Type 2-2 have homozygous α-1 (9kDa) and α-2 (18kDa) subunits, the Type 2-1 has heterozygous α-1 and α-2 subunits, with a common β subunit in all three haplotypes (38kDa). Haptoglobin's three common haplotypes can be distinguished using linear gradient polyacrylamide gel electrophoresis (2.5-27%). Type 1-1 is a single band farthest form the origin, and is estimated to have a molecular weight of 86-100kDa. Haptoglobin types 2-1 and 2-2 appear as a series of bands nearer to the origin. Types 2-1 and 2-2 have increasing molecular weights (200 and 400 kDa, respectively) with some polymers being reported to display other phenotypes that are thought to be significant in population studies. Haptoglobin is found in normal plasma at a concentration of 0.3-1.9 mg/ml and accounts for 0.4-2.6% of the total plasma proteins. It is also one of the group of plasma proteins known as acute phase reactants. The serum levels of which show a marked increase after trauma, cancer, coronary artery disease and during inflammatory diseases, while diseases such as jaundice and cirrhosis can significantly lower the amount of haptoglobin in plasma. The most characteristic property of haptoglobin is its ability to form stable complexes with extra-corpuscular-free native hemoglobin that has been released during hemolysis, and is thus thought to prevent iron loss through urinary excretion and to also prevent renal damage from the hemoglobin. In addition, the native form or normal plasma haptoglobin has been shown to exhibit a broad spectrum of immunosuppressive effects in the immune system. Measurement of haptoglobin levels may therefore be used to monitor the progress of inflammatory reactions and assess the efficiency of test drugs.

Reagents
The product is provided as ascites fluid with 0.1% sodium azide as a preservative.

Precaution and Disclaimer
Due to the sodium azide content a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazards and safe handling practices.

Product Profile
The minimum antibody titer of 1:4,000 was determined by indirect ELISA using 10 µg/ml human haptoglobin for coating the microtiter plate. In order to obtain best results it is recommended that each individual user determine their working dilution by titration assay.

Storage
For continuous use, store at 2-8 °C for up to one month. For extended storage, the solution may be frozen in working aliquots. Repeated freezing and thawing is **not** recommended. Storage in "frost-free" freezers is **not** recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use.

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