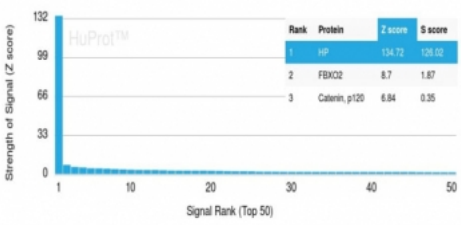
HP Antibody HP/3831 / Haptoglobin Blood Protein Antibody [clone HP/3831] (V4442)

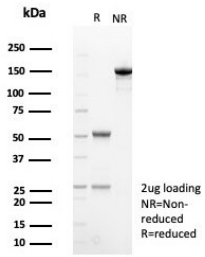
Catalog No.	Formulation	Size
V4442-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4442-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4442SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

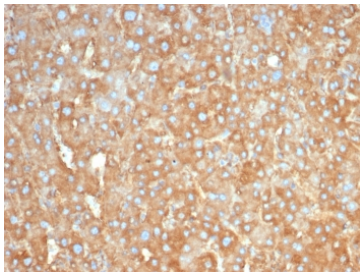
Availability	1-3 business days
Species Reactivity	Human, Rat, Hamster
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	HP/3831
Purity	Protein A/G affinity
UniProt	P00738
Localization	Secreted, Cytoplasm
Applications	Immunohistochemistry (FFPE): 1-2ug/ml for 30 minutes at RT (Human) Western blot: 2-4ug/ml (Human/Rat/Hamster)
Limitations	This HP Antibody HP/3831 / Haptoglobin Blood Protein Antibody is available for research use only.



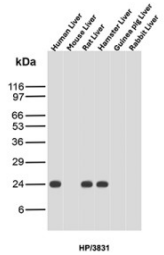
Protein Microarray Validation of HP Antibody HP/3831. Protein microarray analysis of HP Antibody clone HP/3831 using a HuProt array containing more than 19,000 full-length human proteins identifies HP as the dominant binding target. HP ranks first with a Z-score of approximately 39.7 and an S-score of approximately 37.7, showing strong separation from the next-highest array signal. The Z-score represents binding signal relative to the mean signal across the array, while the S-score represents separation between the intended target and the next-highest protein signal.



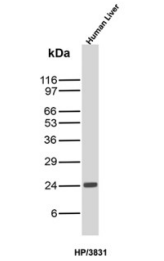
Purified HP Antibody HP/3831 SDS-PAGE. SDS-PAGE analysis of 2 ug purified, BSA-free HP Antibody clone HP/3831 under reducing (R) and non-reducing (NR) conditions. The reduced antibody produces the expected immunoglobulin heavy and light chain bands at approximately 50 and 25 kDa, while the non-reduced antibody migrates at approximately 150 kDa, supporting antibody integrity and purity.



HP Antibody HP/3831 Staining of Human Liver IHC. Immunohistochemistry testing of FFPE human liver tissue with HP Antibody clone HP/3831 shows strong, widespread granular brown cytoplasmic staining of hepatocytes, consistent with hepatic haptoglobin expression. HIER was performed by boiling tissue sections in pH 9 10 mM Tris with 1 mM EDTA for 20 min followed by cooling before antibody testing.



HP Antibody HP/3831 Detection Across Mammalian Liver Tissues WB. Western blot testing of human, mouse, rat, hamster, guinea pig and rabbit liver tissue lysates with HP Antibody clone HP/3831 shows a prominent band at approximately 24 kDa in human, rat and hamster liver, while little to no corresponding signal is evident in mouse, guinea pig or rabbit liver under the tested conditions. Haptoglobin is synthesized as an approximately 45 kDa precursor that undergoes proteolytic processing into alpha and beta chains; the observed band is consistent with the processed haptoglobin beta chain, whose apparent molecular weight can also be influenced by glycosylation.



HP Antibody HP/3831 Detection in Human Liver WB. Western blot testing of human liver tissue lysate with HP Antibody clone HP/3831 shows a strong, discrete band at approximately 24 kDa. Haptoglobin is synthesized as an approximately 45 kDa precursor that undergoes proteolytic processing into alpha and beta chains; the observed band is consistent with the processed haptoglobin beta chain, whose apparent molecular weight can also be influenced by glycosylation.

Description

HP Antibody HP/3831 / Haptoglobin Blood Protein Antibody recognizes haptoglobin, a secreted plasma glycoprotein encoded by the HP gene. Haptoglobin has a central role in the physiological handling of free hemoglobin released from erythrocytes. By forming high-affinity complexes with extracellular hemoglobin, haptoglobin helps restrict the oxidative activity of free hemoglobin and facilitates its removal from the circulation.

Haptoglobin is synthesized as a precursor protein that undergoes proteolytic processing to generate alpha and beta chains connected by disulfide bonds. The beta chain is glycosylated, while variation within the HP gene produces the major Hp1 and Hp2 alpha-chain forms. These give rise to the Hp1-1, Hp2-1 and Hp2-2 haptoglobin phenotypes found in humans. Structural differences among these forms have contributed to extensive research into haptoglobin function and its relationship with hemoglobin metabolism.

As a Haptoglobin Blood Protein Antibody target, HP is particularly relevant to studies of hemolysis and extracellular hemoglobin clearance. Haptoglobin-hemoglobin complexes are recognized by CD163, a scavenger receptor expressed prominently by monocytes and macrophages. Uptake through this pathway promotes removal and processing of hemoglobin while limiting exposure of tissues to its pro-oxidant components.

Haptoglobin is also a major acute-phase protein. Its production can increase during inflammatory responses, linking HP biology with innate immunity, tissue injury and systemic inflammation. Because circulating haptoglobin is consumed during intravascular hemolysis, its abundance reflects the balance between synthesis and hemoglobin-associated utilization. These properties have made HP an extensively investigated plasma protein in studies of inflammatory and hematological processes.

Clone HP/3831 is a mouse monoclonal antibody generated against a recombinant region of human haptoglobin. This HP Antibody is Protein Microarray Validated using a HuProt array containing more than 19,000 full-length human proteins. NSJ Bioreagents offers this Haptoglobin Blood Protein Antibody for research into haptoglobin expression, hemoglobin handling and acute-phase protein biology.

For an additional Protein Microarray Validated monoclonal antibody to haptoglobin, see our Haptoglobin Antibody HP/3835 / Haptoglobin Protein Antibody page.

Application Notes

Optimal dilution of the HP Antibody HP/3831 / Haptoglobin Blood Protein Antibody should be determined by the researcher.

Immunogen

A recombinant partial protein sequence (within amino acids 100-250) from the human protein was used as the immunogen for the HP antibody.

Storage

Aliquot the HP antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

Haptoglobin antibody, Haptoglobin blood protein antibody, Haptoglobin protein antibody, Haptoglobin precursor antibody, Zonulin antibody

Copyright © NSJ Bioreagents. All rights reserved.