

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human Serum Albumin in direct ELISAs and Western blots. Does not detect mouse Serum Albumin in direct ELISAs and Western blots.
<b>Source</b>	Monoclonal Mouse IgG <sub>2A</sub> Clone # 188835
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Human Serum Albumin
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

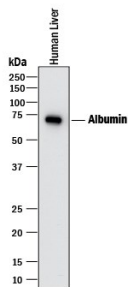
## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
<b>Dual RNAscope ISH-IHC Compatible</b>	0.05-25 µg/mL	See Below
<b>Western Blot</b>	0.2-1 µg/mL	See Below
<b>Immunocytochemistry</b>	8-25 µg/mL	See Below
<b>Immunohistochemistry</b>	0.1-25 µg/mL	See Below
<b>Intracellular Staining by Flow Cytometry</b>	0.25 µg/10 <sup>6</sup> cells	See Below
<b>Simple Western</b>	1-10 µg/mL	See Below
<b>CytoTOF-ready</b>	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

## DATA

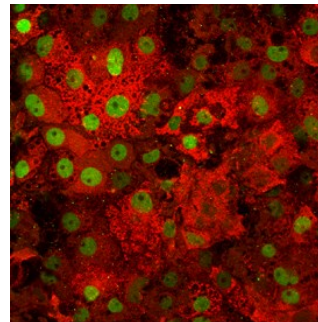
### Western Blot



#### Detection of Human Albumin by Western Blot.

Western blot shows lysate of human liver tissue. PVDF membrane was probed with 1 µg/mL of Mouse Anti-Human Serum Albumin Monoclonal Antibody (Catalog # MAB1455) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for Albumin at approximately 65-70 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

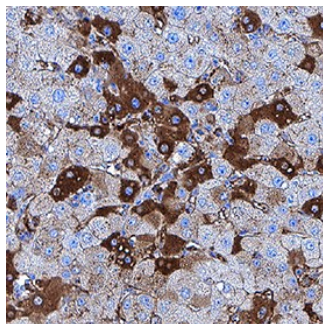
### Immunocytochemistry



#### Albumin in Hepatocytes Derived from Human Embryonic Stem Cells.

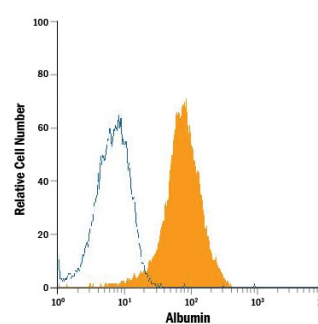
Albumin was detected in immersion fixed BG01V human embryonic stem cells differentiated to hepatocytes using Mouse Anti-Human Serum Albumin Monoclonal Antibody (Catalog # MAB1455) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. Cells were co-stained using Sheep Anti-Human CEBP alpha (Catalog # AF7094) and NorthernLights™ 493-conjugated Anti-Sheep IgG Secondary Antibody (green, Catalog # NL012). View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

### Immunohistochemistry



**Albumin in Human Liver.** Albumin was detected in immersion fixed paraffin-embedded sections of human liver using Mouse Anti-Human Serum Albumin Monoclonal Antibody (Catalog # MAB1455) at 0.1 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Mouse IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC001). Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to cytoplasm and plasma membrane. View our protocol for [IHC Staining with VisUCyte HRP Polymer Detection Reagents](#).

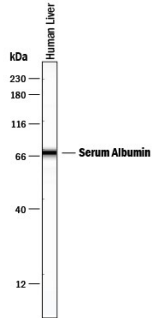
### Intracellular Staining by Flow Cytometry



#### Detection of Albumin in HepG2 Human Cell Line by Flow Cytometry.

HepG2 human hepatocellular carcinoma cell line was stained with Mouse Anti-Human Serum Albumin Monoclonal Antibody (Catalog # MAB1455, filled histogram) or isotype control antibody (Catalog # MAB003, open histogram), followed by Allophycocyanin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0101B). To facilitate intracellular staining, cells were fixed with paraformaldehyde and permeabilized with saponin.

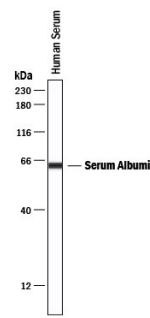
## Simple Western



**Detection of Human Albumin by Simple Western™.** Simple Western lane view shows lysates of human liver tissue, loaded at 0.2 mg/mL. A specific band was detected for Albumin at approximately 64 kDa (as indicated) using 10 µg/mL of Mouse Anti-Human Serum Albumin Monoclonal Antibody (Catalog # MAB1455). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.



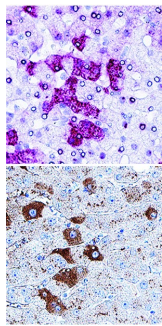
## Simple Western



**Detection of Human Albumin by Simple Western™.** Simple Western lane view shows lysates of human serum, loaded at 1:25000. A specific band was detected for Albumin at approximately 64 kDa (as indicated) using 1 µg/mL of Mouse Anti-Human Serum Albumin Monoclonal Antibody (Catalog # MAB1455). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.



## Dual RNAscope ISH-IHC Compatible



**Serum Albumin in Human Liver Using Dual RNAscope® ISH and IHC.** Serum Albumin mRNA was detected in formalin-fixed paraffin-embedded tissue sections of human liver probed with ACD RNAscope® Probe (Catalog # 600941) and stained using ACD RNAscope® 2.5 HD Detection Reagents-Red (top image, Catalog # 32260). Adjacent tissue section was processed for immunohistochemistry using R&D Systems Mouse Anti-Human Serum Albumin Monoclonal Antibody (Catalog # MAB1455) at 0.05 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Mouse IgG VisUCyte HRP Polymer Antibody (R&D Systems, Catalog # VC001) and DAB chromogen (lower image, yellow-brown). Tissues were counterstained with hematoxylin (blue).

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.5 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

Albumins are a family of globular proteins, the most common of which are serum albumins. Albumins are commonly found in blood plasma, and are unique from other blood proteins in that they are not glycosylated. Albumin is a 65-70 kDa protein with serum albumin being the main protein of human blood plasma. It binds water, cations (such as Ca<sup>2+</sup>, Na<sup>+</sup> and K<sup>+</sup>), fatty acids, hormones, bilirubin, thyroxine (T<sub>4</sub>) and pharmaceuticals (including barbiturates) - its main function is to regulate the colloidal osmotic pressure of blood. Albumin comprises three homologous domains that assemble to form a heart-shaped molecule. Each domain is a product of two subdomains that possess common structural motifs. The principal regions of ligand binding to human serum albumin are located in hydrophobic cavities in subdomains IIA and IIIA, which exhibit similar chemistry. Structurally, the serum albumins are similar, each domain containing five or six internal disulfide bonds.