abcam

ab271979

Anti-Albumin antibody [EPR20195] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR20195
Purification technique	Affinity purification Protein A
Concentration	1.048 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Human
Dilution info	-

Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	Permeabilization is required.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information ALB

Function Binds water, Ca(2+), Na(+), K(+), fatty acids, hormones, bilirubin and drugs (Probable). Its main function is the regulation of the colloidal osmotic pressure of blood (Probable). Major zinc transporter in plasma, typically binds about 80% of all plasma zinc (PubMed:19021548). Major calcium and magnesium transporter in plasma, binds approximately 45% of circulating calcium and magnesium in plasma (By similarity). Potentially has more than two calcium-binding sites and might additionally bind calcium in a non-specific manner (By similarity). The shared binding site between zinc and calcium at residue Asp-273 suggests a crosstalk between zinc and calcium transport in the blood (By similarity). The rank order of affinity is zinc > calcium > magnesium (By similarity). Binds to the bacterial siderophore enterobactin and inhibits enterobactin-mediated iron uptake of E.coli from ferric transferrin, and may thereby limit the utilization of iron and growth of enteric bacteria such as E.coli (PubMed:6234017). Does not prevent iron uptake by the bacterial siderophore aerobactin (PubMed:6234017).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab271979 is the carrier-free version of ab207327.

Patented technology

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?

This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Albumin also known as ALB is a major plasma protein with a molecular mass of approximately 66.5 kDa. It predominantly gets synthesized in the liver and found abundantly in blood plasma. Albumin serves multiple functions including maintaining osmotic pressure and acting as a carrier protein for various endogenous substances like hormones fatty acids and bilirubin.
Biological function summary	Albumin plays a critical role in transporting small molecules like metabolites and drugs through the circulatory system. It is not a part of any complex but functions independently to bind transport and release various ligands. Albumin's affinity for hydrophobic molecules makes it essential for they to be solubilized in blood for proper metabolism and excretion.
Pathways	More than five binding sites on albumin facilitate its role in the fatty acid metabolism and renin-angiotensin system pathways. In fatty acid metabolism albumin interacts with transport proteins carrying fatty acids to tissues for energy production. Additionally during the renin-angiotensin system albumin modulates blood pressure through its interaction with angiotensin II which can influence vasoconstriction.

Associated diseases and disorders	Researchers link albumin with nephrotic syndrome and liver cirrhosis. In nephrotic syndrome low levels of albumin (albumin low) can cause edema due to imbalanced osmotic pressure. In liver cirrhosis a reduction in albumin synthesis signifies liver damage. Albumin's interaction with proteins like angiotensin II correlates with complications such as hypertension further establishing the protein's role in health and disease contexts.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

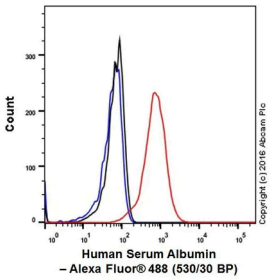
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

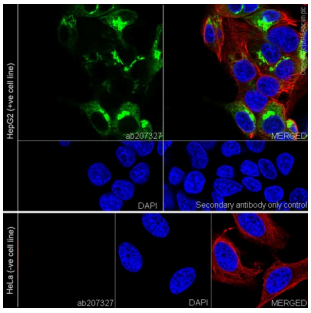
4 product images



Flow Cytometry (Intracellular) - Anti-Albumin antibody [EPR20195] - BSA and Azide free (ab271979)

Albumin Flow Cytometry (Intracellular) staining using rabbit Anti-Albumin antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed permeabilized HepG2 (Human liver hepatocellular carcinoma cell line) cells labeling Albuminwith ab207327 at 1/500 dilution (red) compared with a rabbit monoclonal IgG isotype control (ab172730; black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody; blue). Goat anti rabbit IgG (Alexa Fluor® 488) at 1/2000 dilution was used as the secondary antibody.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab207327).



Immunocytochemistry/ Immunofluorescence - Anti-Albumin antibody [EPR20195] - BSA and Azide free (ab271979)

Albumin Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Albumin antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HepG2 (Human liver hepatocellular carcinoma cell line) or HeLa (Human epithelial cell line from cervix adenocarcinoma) cells labeling Albumin with ab207327 at 1/500 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing cytoplasmic staining on HepG2 cell line.

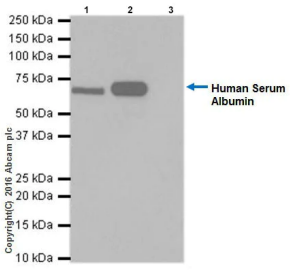
Negative control: HeLa (PMID: 10476216 and 8314088)).

The nuclear counterstain is DAPI (blue).

Tubulin is detected with ab195889 (Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594)) at 1/200 dilution (red).

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) at 1/1000 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab207327).



Immunoprecipitation - Anti-Albumin antibody [EPR20195] - BSA and Azide free (ab271979)

Albumin was immunoprecipitated from 0.35 mg of HepG2 (Human liver hepatocellular carcinoma cell line) whole cell lysate with ab207327 at 1/40 dilution.
Western blot was performed from the immunoprecipitate using ab207327 at 1/1000 dilution.

VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/10000 dilution.

Lane 1: HepG2 whole cell lysate, 10µg (Input).

Lane 2: ab207327 IP in HepG2 whole cell lysate.

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab207327 in HepG2 whole cell lysate.

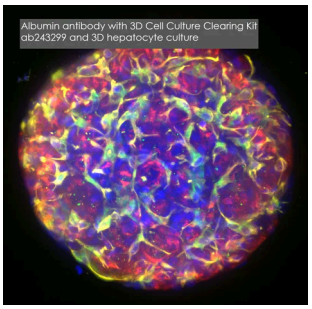
Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 30 seconds.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab207327).
All lanes:
Immunoprecipitation - Anti-Albumin antibody [EPR20195] (ab207327)

Predicted band size: 69 kDa

Observed band size: 69 kDa



Immunocytochemistry/ Immunofluorescence - Anti-Albumin antibody [EPR20195] - BSA and Azide free (ab271979)

Albumin antibody ab207327 was used with 3D Cell Culture Clearing Kit ab243299 to penetrate, stain and clear a 3D hepatocyte cell culture. Blue: DAPI, Green: CD68, Yellow: Albumin, Red: Vimentin Learn more about 3D cell culture and tissue clearing kits, reagents, and protocols designed to make it easier to stain 3D cell cultures and thick tissue sections and get more data from each valuable tissue section.This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab207327).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.