Anti-Albumin Antibody [1-G10]

EM1901-81

Product Type:	Mouse monoclonal IgG1, primary antibodies
Species reactivity:	Human
Applications:	WB, FC, ELISA
Molecular Wt:	69 kDa
Clone number:	1-G10

Description: Serum albumin, the main protein of plasma, has a good binding capacity for water, Ca2+, 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 . 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 . Does not prevent iron uptake by the bacterial siderophore aerobactin .

Immunogen: Native protein.

Positive control: Human plasma tissue lysates, HepG2.

Subcellular location: Secreted.

Database links: SwissProt: P02768 Human

Recommended Dilutions:

WB	1:10,000-1:50,000
FC	1:50-1:100
ELISA	1: 5,000-1:20,000

Storage Buffer: 1*PBS (pH7.4), 0.2% BSA, 50% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

Images

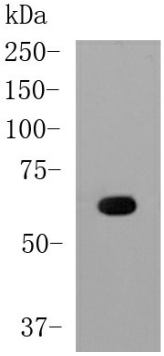

Fig1: Western blot analysis of Albumin on human plasma sample. Proteins were transferred to a PVDF membrane and blocked with 5% BSA in PBS for 1 hour at room temperature. The primary antibody (EM1901-81, 1/50000) was used in 5% BSA at room temperature for 2 hours. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1:5,000 dilution was used for 1 hour at room temperature.

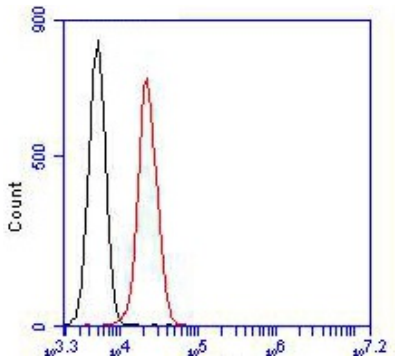

Fig2: Flow cytometric analysis of Albumin was done on HepG2 cells. The cells were fixed, permeabilized and stained with the primary antibody (EM1901-81, 1/100) (red). After incubation of the primary antibody at room temperature for an hour, the cells were stained with Alexa FluorTM488 Goat anti-Mouse IgG Secondary antibody at 1/500 dilution for 30 minutes.Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

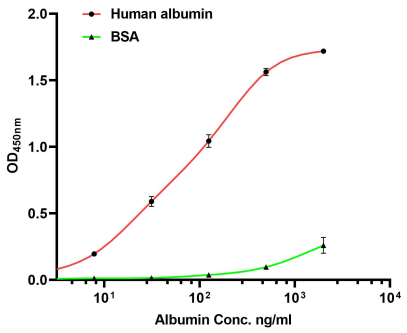

Fig3: Albumin Antibody (EM1901-81) in indirect ELISA.

Indirect ELISA analysis of Albumin was performed by coating wells of a 96-well plate with 50 µl per well of human albumin antigen or BSA diluted in carbonate/bicarbonate buffer, at a concentration of 1 µg/mL overnight at 4℃. Wells of the plate were washed, blocked with StartingBlock blocking buffer, and incubated with 50 µl per well of a mouse Albumin monoclonal antibody starting at a concentration of 2 µg/mL and serially diluting it to a concentration of 1.95 ng/mL for 2 hours at room temperature. The plate was washed and incubated with 50 µl per well of an HRP-conjugated goat anti-mouse IgG secondary antibody at a dilution of 1:10,000 for one hour at room temperature. Detection was performed using an Ultra TMB Substrate for 5 minutes at room temperature in the dark. The reaction was stopped with sulfuric acid and absorbances were read on a spectrophotometer at 450 nm.

Background References

1. Konopka K.et.al.Effect of serum albumin on siderophore-mediated utilization of transferrin iron.Biochemistry 23:2122-2127(1984).