Anti-Human/Monkey Albumin Antibody [PSH20-16] - BSA and Azide free (Capture)

HA724127

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Monkey
Applications:	ELISA(Cap)
Clone number:	PSH20-16

Description: Serum albumin (ALB), the main protein in plasma, has a very good binding capacity for water, fatty acids, calcium, sodium, bilirubin, hormones, potassium and drugs. The primary function of ALB is to regulate the colloidal osmotic pressure of blood. Albumin is synthesized in the liver as preproalbumin, which has an N-terminal peptide that is removed before the nascent protein is released from the rough endoplasmic reticulum. The product, proalbumin, is in turn cleaved in the Golgi vesicles to produce the secreted form of albumin. Mutations in the ALB gene may result in familial dysalbuminemic hyperthyroxinemia (FDH), a form of euthyroid hyperthyroxinemia that is due to increased affinity of ALB for T4. FDH is the most common cause of inherited euthyroid hyperthyroxinemia in Caucasian populations.

Immunogen: Recombinant protein within Human Serum Albumin.

Positive control: Human Albumin protein (A3782, sigma).

Subcellular location: Secreted.

Database links: SwissProt: P02768 Human

Recommended Dilutions:

ELISA(Cap) Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH20-17] to Human/Monkey Albumin antibody (Detector) (HA724128) and Human Albumin protein (A3782, sigma) as the standard. The reference range value is 78.1-5,000 pg/mL.

Storage Buffer: PBS (pH7.4).

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

Purity: Protein A affinity purified.

Images

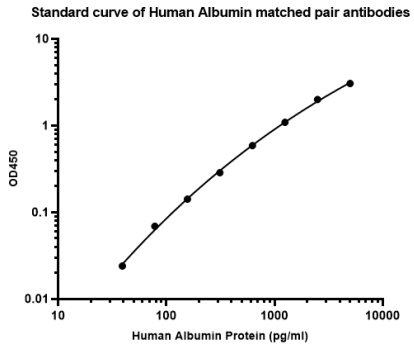

Fig1: Sandwich ELISA analysis of Human Albumin matched pair antibodies

Capture: HA724127, Human/Monkey Albumin Rabbit mAb [PSH20-16]
Detector: HA724128, Human/Monkey Albumin Rabbit mAb [PSH20-17]

Elisa assay was performed by coating wells of a 96-well plate with 100 µl per well of capture antibody (HA724127) diluted in carbonate/bicarbonate buffer, at a concentHumanion of 2 µg/mL overnight at 4℃. Wells of the plate were washed, blocked with 150 µl 0.05% tween-20 1% BSA blocking buffer, and incubated with serial diluted Human Albumin protein (A3782, sigma) starting from 5,000 pg/ml to 0 pg/ml and detect antibody (HA724128, Biotin, 0.05 µg/ml) for 1 hour at 30℃ with shaking. Then the plate was washed and incubated with 100 µl per well of SA-HRP for 0.5 hour at 30℃ with shaking. Detection was performed using an Ultra TMB SubstHumane for 10 minutes at room temperature in the dark. The reaction was stopped with sulfuric acid and absorbances were read on a spectrophotometer at 450 nm.

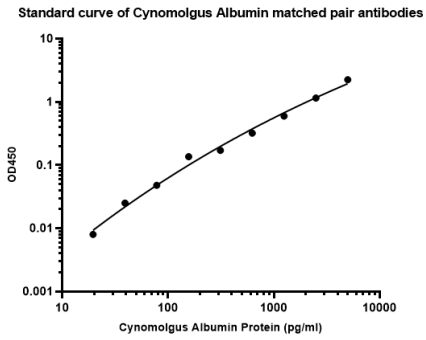

Fig2: Sandwich ELISA analysis of Monkey Albumin matched pair antibodies

Capture: HA724127, Human/Monkey Albumin Rabbit mAb [PSH20-16]
Detector: HA724128, Human/Monkey Albumin Rabbit mAb [PSH20-17]

Elisa assay was performed by coating wells of a 96-well plate with 100 µl per well of capture antibody (HA724127) diluted in carbonate/bicarbonate buffer, at a concentCynomolgusion of 2 µg/mL overnight at 4℃. Wells of the plate were washed, blocked with 150 µl 0.05% tween-20 1% BSA blocking buffer, and incubated with serial diluted Monkey Albumin protein (BSA-CM101, Kactusbio) starting from 5,000 pg/ml to 0 pg/ml and detect antibody (HA724128, Biotin, 0.05 µg/ml) for 1 hour at 30℃ with shaking. Then the plate was washed and incubated with 100 µl per well of SA-HRP for 0.5 hour at 30℃ with shaking. Detection was performed using an Ultra TMB SubstHumane for 10 minutes at room temperature in the dark. The reaction was stopped with sulfuric acid and absorbances were read on a spectrophotometer at 450 nm.

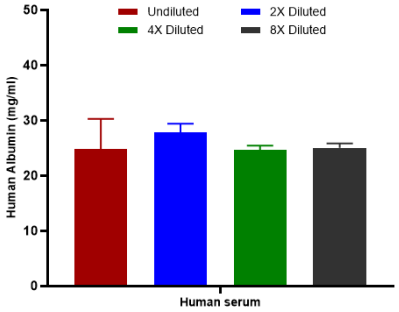

Fig3: Interpolated concentrations of native Albumin in human serum samples.

Capture: HA724127, Human/Monkey Albumin Rabbit mAb [PSH20-16]
Detector: HA724128, Human/Monkey Albumin Rabbit mAb [PSH20-17]

The concentrations of Albumin were measured in duplicates, interpolated from the Albumin standard curve and corrected for sample dilution. Undiluted samples are human serum 0.0000063%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean Albumin concentration was determined to be 25.6 mg/ml in human serum.

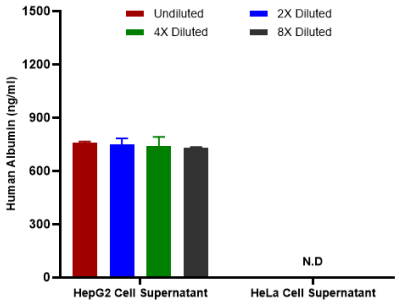

Fig4: Interpolated concentrations of native Albumin in HepG2 and HeLa cell culture supernatant.

Capture: HA724127, Human/Monkey Albumin Rabbit mAb [PSH20-16]
Detector: HA724128, Human/Monkey Albumin Rabbit mAb [PSH20-17]

The concentrations of Albumin were measured in duplicates, interpolated from the Albumin standard curve and corrected for sample dilution. Undiluted samples are HepG2 cell culture supernatant 0.5% and HeLa cell culture supernatant 50%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean Albumin concentration was determined to be 745.1 ng/ml in HepG2 cell culture supernatant and undetectable in HeLa cell culture supernatant.

Background References

1. Zhai W et al. A1 adenosine receptor attenuates intracerebral hemorrhage-induced secondary brain injury in rats by activating the P38-MAPKAP2-Hsp27 pathway. Mol Brain 9:66 (2016).
2. Ma J et al. Pramipexole-Induced Hypothermia Reduces Early Brain Injury via PI3K/AKT/GSK3 pathway in Subarachnoid Hemorrhage rats. Sci Rep 6:23817 (2016).