

# ALB (SAB117): sc-69873

## BACKGROUND

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.

## REFERENCES

1. Ruiz, M., et al. 1982. Familial dysalbuminemic hyperthyroxinemia: a syndrome that can be confused with thyrotoxicosis. *N. Engl. J. Med.* 306: 635-639.
2. Angelisova, P., et al. 1986. The characteristics of monoclonal antibodies against human albumin. *Folia Biol.* 32: 289-294.
3. Bennett, P.H., et al. 1995. Screening and management of microalbuminuria in patients with diabetes mellitus: recommendations to the Scientific Advisory Board of the National Kidney Foundation from an ad hoc committee of the Council on Diabetes Mellitus of the National Kidney Foundation. *Am. J. Kidney Dis.* 25: 107-112.
4. Wachtell, K., et al. 2003. Albuminuria and cardiovascular risk in hypertensive patients with left ventricular hypertrophy: the LIFE study. *Ann. Intern. Med.* 139: 901-906.
5. Salmasi, A.M., et al. 2003. The degree of albuminuria is related to left ventricular hypertrophy in hypertensive diabetics and is associated with abnormal left ventricular filling: a pilot study. *Angiology* 54: 671-678.
6. Tavoulari, S., et al. 2004. The recombinant subdomain IIIB of human serum albumin displays activity of gonadotrophin surge-attenuating factor. *Hum. Reprod.* 19: 849-858.
7. Mitrogianni, Z., et al. 2004. Tyrosine nitration in plasma proteins from patients undergoing hemodialysis. *Am. J. Kidney Dis.* 44: 286-292.

## CHROMOSOMAL LOCATION

Genetic locus: ALB (human) mapping to 4q13.3.

## SOURCE

ALB (SAB117) is a mouse monoclonal antibody raised against ALB serum of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## APPLICATIONS

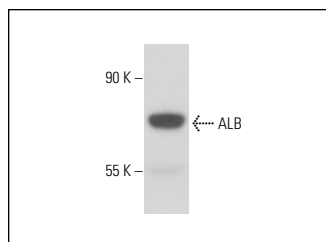
ALB (SAB117) is recommended for detection of ALB of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for ALB siRNA (h): sc-45606, ALB shRNA Plasmid (h): sc-45606-SH and ALB shRNA (h) Lentiviral Particles: sc-45606-V.

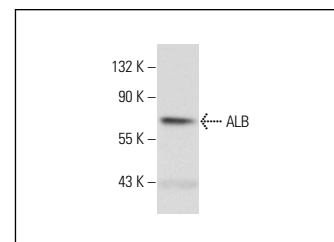
Molecular Weight of ALB: 66 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, human plasma extract: sc-364374 or HeLa whole cell lysate: sc-2200.

## DATA



ALB (SAB117): sc-69873. Western blot analysis of ALB expression in Hep G2 whole cell lysate.



ALB (SAB117): sc-69873. Western blot analysis of ALB expression in Hep G2 whole cell lysate.

## SELECT PRODUCT CITATIONS

1. Kopper, O. and Benvenisty, N. 2012. Stepwise differentiation of human embryonic stem cells into early endoderm derivatives and their molecular characterization. *Stem Cell Res.* 8: 335-345.
2. Levy, G., et al. 2015. Long-term culture and expansion of primary human hepatocytes. *Nat. Biotechnol.* 33: 1264-1271.
3. Wang, G., et al. 2018. Co-culture system of hepatocytes and endothelial cells: two *in vitro* approaches for enhancing liver-specific functions of hepatocytes. *Cytotechnology* 70: 1279-1290.
4. Wang, S., et al. 2019. Tumor necrosis factor-inducible gene 6 reprograms hepatic stellate cells into stem-like cells, which ameliorates liver damage in mouse. *Biomaterials* 219: 119375.
5. Lee, C., et al. 2022. Formyl peptide receptor 2 determines sex-specific differences in the progression of nonalcoholic fatty liver disease and steatohepatitis. *Nat. Commun.* 13: 578.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.



See **ALB (F-10): sc-271605** for ALB antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.