

ALB (G-8): sc-515019

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 prealbumin, which has an N-terminal peptide that is removed before the nascent protein is released from the rough endoplasmic reticulum. The product, prealbumin, 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. *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 (mouse) mapping to 5 E1.

SOURCE

ALB (G-8) is a mouse monoclonal antibody raised against amino acids 25-164 mapping near the N-terminus of serum albumin of mouse origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

ALB (G-8) is recommended for detection of ALB of mouse origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ALB siRNA (m): sc-45607, ALB shRNA Plasmid (m): sc-45607-SH and ALB shRNA (m) Lentiviral Particles: sc-45607-V.

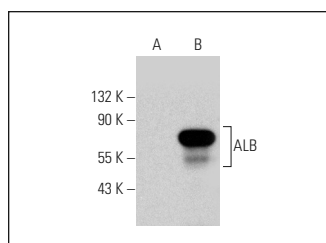
Molecular Weight of ALB: 66 kDa.

Positive Controls: ALB (m): 293T Lysate: sc-118327.

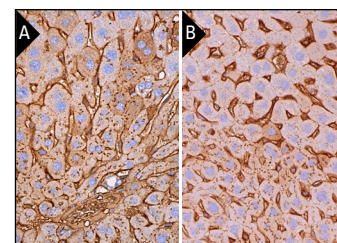
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



ALB (G-8): sc-515019. Western blot analysis of ALB expression in non-transfected: sc-117752 (A) and mouse ALB transfected: sc-118327 (B) 293T whole cell lysates.



ALB (G-8): sc-515019. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse liver tissue showing membrane and cytoplasmic staining of hepatocytes and hepatic sinusoid cells (A) and cytoplasmic staining of bile duct cells and membrane and cytoplasmic staining of hepatocytes and hepatic sinusoids. Detected with m-IgGκ BP-HRP (mouse IgGκ binding protein-HRP):sc-516102 (B).

RESEARCH USE

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



See **ALB (F-8): sc-374670** for ALB antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647.