ALB (N-18): sc-46291

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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 prepro-albumin, 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. Online Mendelian Inheritance in Man, OMIM™. 1986. Johns Hopkins University, Baltimore, MD. MIM Number: 103600. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

3. 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.

4. Mitrogianni, Z., et al. 2004. Tyrosine nitration in plasma proteins from patients undergoing hemodialysis. Am. J. Kidney Dis. 44: 286-292.

5. Alderson, P., et al. 2004. Human Albumin solution for resuscitation and volume expansion in critically ill patients. Cochrane Database Syst. Rev. 4: CD001208.

6. Seppelt, I., et al. 2005. Human Albumin meta-analysis. Crit. Care Med. 33: 914-917.

7. SWISS-PROT/TrEMBL (P02768). World Wide Web URL: http://www.expasy.ch/sprot/sprot-top.html

CHROMOSOMAL LOCATION

Genetic locus: ALB (human) mapping to 4q13.3; Alb1 (mouse) mapping to 5 E2.

SOURCE

ALB (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Serum Albumin of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-46291 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ALB (N-18) is recommended for detection of ALB of mouse, rat and, to a lesser extent, 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).
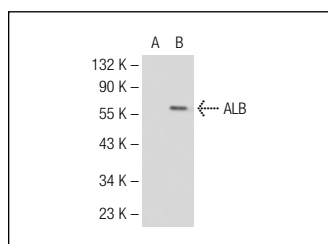
ALB (N-18) is also recommended for detection of ALB in additional species, including canine.

Suitable for use as control antibody for ALB siRNA (h): sc-45606, ALB siRNA (m): sc-45607, ALB shRNA Plasmid (h): sc-45606-SH, ALB shRNA Plasmid (m): sc-45607-SH, ALB shRNA (h) Lentiviral Particles: sc-45606-V and ALB shRNA (m) Lentiviral Particles: sc-45607-V.
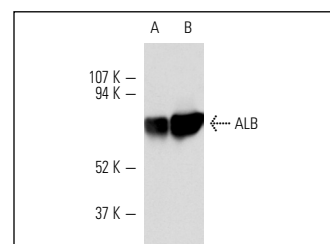
Molecular Weight of ALB: 66 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211, mouse kidney extract: sc-2255 or ALB (m): 293T Lysate: sc-118327.

DATA

ALB (N-18): sc-46291. Western blot analysis of ALB expression in non-transfected: sc-117752 (**A**) and mouse ALB transfected: sc-118327 (**B**) 293T whole cell lysates.

ALB (N-18): sc-46291. Western blot analysis of ALB expression in rat (**A**) and mouse (**B**) liver tissue extracts.

SELECT PRODUCT CITATIONS

1. Chandler, R.J., et al. 2008. Adenovirus-mediated gene delivery rescues a neonatal lethal murine model of mut(0) methylmalonic acidemia. Hum. Gene Ther. 19: 53-60.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.