SANTA CRUZ BIOTECHNOLOGY, INC.

ALB (P-20): sc-46293

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

CHROMOSOMAL LOCATION

Genetic locus: ALB (human) mapping to 4q13.3; Alb (mouse) mapping to 5 E1.

SOURCE

ALB (P-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of serum albumin of mouse origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-46293 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ALB (P-20) is recommended for detection of ALB of mouse, rat and 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), 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 (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: rat liver extract: sc-2395, mouse liver extract: sc-2256 or HeLa whole cell lysate: sc-2200.

STORAGE

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

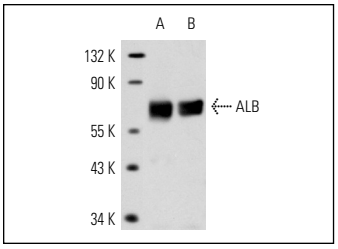
PROTOCOLS

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

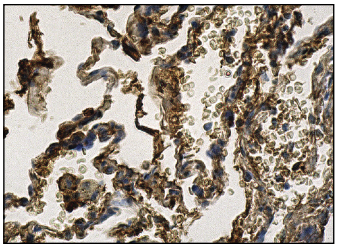
RESEARCH USE

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

DATA



ALB (P-20): sc-46293. Western blot analysis of ALB expression in rat (**A**) and mouse (**B**) liver tissue extracts.



ALB (P-20): sc-46293. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lung tissue showing cytoplasmic staining of macrophages and pneumocytes.

SELECT PRODUCT CITATIONS

1. Tsukada, Y., et al. 2009. Extracellular matrix is required for the survival and differentiation of transplanted hepatic progenitor cells. Biochem. Biophys. Res. Commun. 381: 733-737.
2. Shao, C., et al. 2009. Shotgun proteomic analysis of hibernating arctic ground squirrels. Mol. Cell. Proteomics 9: 313-326.
3. Farzaneh, Z., et al. 2010. Enhanced functions of human embryonic stem cell-derived hepatocyte-like cells on three-dimensional nanofibrillar surfaces. Stem Cell Rev. 6: 601-610.
4. Ghodsizadeh, A., et al. 2010. Generation of liver disease-specific induced pluripotent stem cells along with efficient differentiation to functional hepatocyte-like cells. Stem Cell Rev. 6: 622-632.
5. Piryaei, A., et al. 2011. Differentiation of bone marrow-derived mesenchymal stem cells into hepatocyte-like cells on nanofibers and their transplantation into a carbon tetrachloride-induced liver fibrosis model. Stem Cell Rev. 7: 103-118.
6. Obokata, H., et al. 2011. The potential of stem cells in adult tissues representative of the three germ layers. Tissue Eng. Part A 17: 607-615.
7. Asgari, S., et al. 2011. Differentiation and transplantation of human induced pluripotent stem cell-derived hepatocyte-like cells. Stem Cell Rev. 9: 493-504.
8. Wang, X.L., et al. 2012. Effect of Yiguanjian decoction on cell differentiation and proliferation in CCl_4-treated mice. World J. Gastroenterol. 18: 3235-3249.
9. Cyphert, H.A., et al. 2012. Activation of the farnesoid X receptor induces hepatic expression and secretion of fibroblast growth factor 21. J. Biol. Chem. 287: 25123-25138.
10. Li, C., et al. 2013. Effects of maternal nutrient restriction, intrauterine growth restriction, and glucocorticoid exposure on phosphoenolpyruvate carboxykinase-1 expression in fetal baboon hepatocytes *in vitro*. J. Med. Primatol. 42: 211-219.