

# ALB (F-8): sc-374670

## 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, 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 T<sub>4</sub>. FDH is the most common cause of inherited euthyroid hyperthyroxinemia in Caucasian populations.

## CHROMOSOMAL LOCATION

Genetic locus: Alb (mouse) mapping to 5 E1.

## SOURCE

ALB (F-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 559-591 near the C-terminus of serum albumin of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ALB (F-8) is available conjugated to agarose (sc-374670 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374670 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374670 PE), fluorescein (sc-374670 FITC), Alexa Fluor<sup>®</sup> 488 (sc-374670 AF488), Alexa Fluor<sup>®</sup> 546 (sc-374670 AF546), Alexa Fluor<sup>®</sup> 594 (sc-374670 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-374670 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-374670 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-374670 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-374670 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

ALB (F-8) is recommended for detection of ALB of mouse and rat 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.

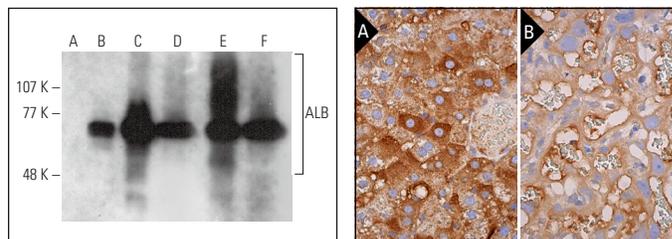
Molecular Weight of ALB: 66 kDa.

Positive Controls: ALB (m): 293T Lysate: sc-118327, mouse liver extract: sc-2256 or mouse lung extract: sc-2390.

## STORAGE

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

## DATA



ALB (F-8) HRP: sc-374670 HRP. Direct western blot analysis of ALB expression in non-transfected 293T: sc-117752 (A) and mouse ALB transfected 293T: sc-118327 (B) whole cell lysates and mouse lung (C), mouse liver (D), mouse PBL (E) and mouse heart (F) tissue extracts.

ALB (F-8): sc-374670. Immunoperoxidase staining of formalin fixed, paraffin-embedded rat liver tissue showing cytoplasmic staining of hepatocytes (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded rat placenta tissue showing cytoplasmic staining of trophoblastic cells, decidua cells and plasma staining (B).

## SELECT PRODUCT CITATIONS

- Duan, P., et al. 2012. Effect of neuronal induction on NSE, Tau, and Oct4 promoter methylation in bone marrow mesenchymal stem cells. *In Vitro Cell. Dev. Biol. Anim.* 48: 251-258.
- Kongsbak, M., et al. 2014. Vitamin D-binding protein controls T cell responses to vitamin D. *BMC Immunol.* 15: 35.
- Bertrand, J., et al. 2015. Glutamine enema regulates colonic ubiquitinated proteins but not proteasome activities during TNBS-induced colitis leading to increased mitochondrial activity. *Proteomics* 15: 2198-2210.
- Soares Martins, T., et al. 2018. Exosome isolation from distinct biofluids using precipitation and column-based approaches. *PLoS ONE* 13: e0198820.
- Palazzolo, S., et al. 2019. An effective multi-stage liposomal DNA origami nanosystem for *in vivo* cancer therapy. *Cancers* 11: 1997.
- Tocan, V., et al. 2021. Hepatocyte polarity establishment and apical lumen formation are organized by Par3, Cdc42, and aPKC in conjunction with Lgl. *J. Biol. Chem.* 297: 101354.
- Senigaglia, B., et al. 2022. Triple negative breast cancer-derived small extracellular vesicles as modulator of biomechanics in target cells. *Nanomedicine* 44: 102582.
- Varricchio, R., et al. 2024. Human serum albumin binds spike protein and protects cells from SARS-CoV-2 infection by modulating the RAS pathway. *Aspects Mol. Med.* 3: 100033.

## RESEARCH USE

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

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