

ALB (SAB117): sc-69873

BACKGROUND

Sab is a Src homology 3 domain (SH3) binding protein that preferentially associates with Bruton's tyrosine kinase, Btk, over other related tyrosine kinases. Btk, together with Itk, Tec, Txk and Bmx, is a member of a family of cytoplasmic tyrosine kinases (the Btk/Tec family). Btk is a B cell specific kinase that is crucial for human and murine B cell development, and its deficiency causes human X-linked agammaglobulinemia and murine X-linked immunodeficiency. Sab serves as a negative regulator of Btk kinase activity and Sab binding to Btk reduces the phosphorylation of Btk substrates and also inhibits Btk-induced auto-phosphorylation in B cells. The SH3 domain of Sab directly binds to the SH3 domain of Btk and this interaction is essential for the regulatory activity of Sab. Sab is more broadly expressed than Btk, suggesting that Sab may target additional protein kinases that are specific to various tissues.

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 mel 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 IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

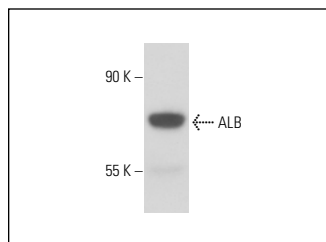
ALB (SAB117) is recommended for detection of ALB of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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.

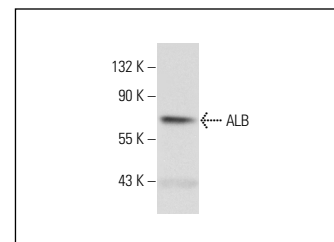
Molecular Weight of ALB: 66 kDa.

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.



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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.

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.



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.