

Sab (h2): 293T Lysate: sc-171068

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 autophosphorylation 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

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3. Satterthwaite, A.B., et al. 1998. Btk function in B-cell development and response. *Semin. Immunol.* 10: 309-316.
4. Yamadori, T., et al. 1999. Bruton's tyrosine kinase activity is negatively regulated by Sab, the Btk-SH3 domain-binding protein. *Proc. Natl. Acad. Sci. USA* 96: 6341-6346.
5. Kawakami, Y., et al. 1999. Functions of Bruton's tyrosine kinase in mast and B-cells. *J. Leukoc. Biol.* 65: 286-290.
6. Morrogh, L.M., et al. 1999. The SH3 domain of Bruton's tyrosine kinase displays altered ligand binding properties when auto-phosphorylated *in vitro*. *Eur. J. Immunol.* 29: 2269-2279.
7. Hashimoto, S., et al. 1999. Identification of the SH2 domain binding protein of Bruton's tyrosine kinase as BLNK—functional significance of Btk-SH2 domain in B-cell antigen receptor-coupled calcium signaling. *Blood* 94: 2357-2364.

CHROMOSOMAL LOCATION

Genetic locus: SH3BP5 (human) mapping to 3p25.1.

PRODUCT

Sab (h2): 293T Lysate represents a lysate of human Sab transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

Sab (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive Sab antibodies. Recommended use: 10-20 µl per lane.

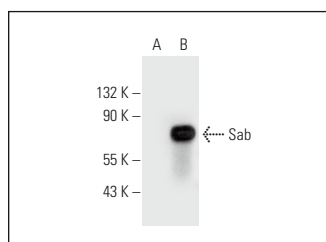
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Sab (A-3): sc-390512 is recommended as a positive control antibody for Western Blot analysis of enhanced human Sab expression in Sab transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



Sab (A-3): sc-390512. Western blot analysis of Sab expression in non-transfected: sc-117752 (A) and human Sab transfected: sc-171068 (B) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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