SANTA CRUZ BIOTECHNOLOGY, INC.

Lyl-1 (F-9): sc-390277

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Lyl-1, TAL1 and TAL2 are part of a family of basic helix-loop-helix (bHLH) proteins implicated in T cell acute leukemia. TAL1, also designated SCL, is a serine phosphoprotein and basic helix-loop-helix transcription factor known to regulate embryonic hematopoiesis. TAL2 is a protein involved in T cell acute lymphoblastic leukemia through a chromosomal translocation involving TAL2 and T cell receptor β chain genes. TAL2 includes a helix-loop-helix protein dimerization and DNA-binding domain that is homologous to TAL1 and Lyl-1 proto-oncogenes. Lyl-1 (lymphoblastic leukemia-derived sequence 1) is a nuclear protein. Endogenous Lyl-1 exists in complex with E2α proteins. Lyl-1 and E2α protein can form heterodimeric complexes with distinctive DNA-binding properties in hematolymphoid cells. Lyl-1 is involved in a chromosomal aberration which causes a form of T cell acute lymphoblastic leukemia (T-ALL).

REFERENCES

1. Cleary, M.L., et al. 1988. Chromosomal translocation involving the β T cell receptor gene in acute leukemia. J. Exp. Med. 167: 682-687.
2. Mellentin, J.D., et al. 1989. Lyl-1, a novel gene altered by chromosomal translocation in T cell leukemia, codes for a protein with a helix-loop-helix DNA-binding motif. Cell 58: 77-83.
3. Kuo, S.S., et al. 1991. Structure, chromosome mapping, and expression of the mouse Lyl-1 gene. Oncogene 6: 961-968.
4. Goldfarb, A.N., et al. 1992. T-cell acute lymphoblastic leukemia—the associated gene SCL/TAL codes for a 42-Kd nuclear phosphoprotein. Blood 80: 2858-2866.
5. Trask, B., et al. 1993. Fluorescence *in situ* hybridization mapping of human chromosome 19: cytogenetic band location of 540 cosmids and 70 genes or DNA markers. Genomics 15: 133-145.

CHROMOSOMAL LOCATION

Genetic locus: Lyl1 (mouse) mapping to 8 C3.

SOURCE

Lyl-1 (F-9) is a mouse monoclonal antibody raised against amino acids 199-278 mapping at the C-terminus of Lyl-1 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-390277 X, 200 µg/0.1 ml.

Lyl-1 (F-9) is available conjugated to agarose (sc-390277 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390277 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390277 PE), fluorescein (sc-390277 FITC), Alexa Fluor® 488 (sc-390277 AF488), Alexa Fluor® 546 (sc-390277 AF546), Alexa Fluor® 594 (sc-390277 AF594) or Alexa Fluor® 647 (sc-390277 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390277 AF680) or Alexa Fluor® 790 (sc-390277 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Lyl-1 (F-9) is recommended for detection of Lyl-1 of mouse 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Lyl-1 siRNA (m): sc-45689, Lyl-1 shRNA Plasmid (m): sc-45689-SH and Lyl-1 shRNA (m) Lentiviral Particles: sc-45689-V.

Lyl-1 (F-9) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

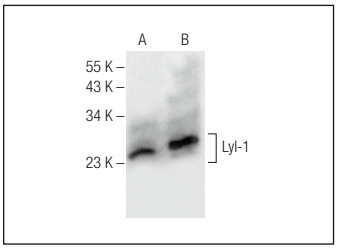
Molecular Weight of Lyl-1: 28 kDa.

Positive Controls: I-11.15 whole cell lysate: sc-364370 or SP2/0 whole cell lysate: sc-364795.

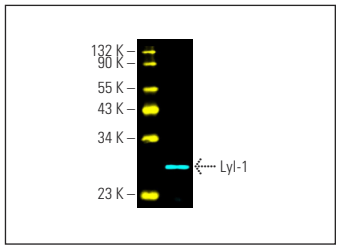
RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Lyl-1 (F-9): sc-390277. Western blot analysis of Lyl-1 expression in SP2/0 (**A**) and I-11.15 (**B**) whole cell lysates.



Lyl-1 (F-9) Alexa Fluor® 647: sc-390277 AF647. Direct fluorescent western blot analysis of Lyl-1 expression in human PBL whole cell lysate. Blocked with UltraCruz® Blocking Reagent: sc-516214. Cruz Marker™ Molecular Weight Standards detected with Cruz Marker™ MW Tag-Alexa Fluor® 488: sc-516790.

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.