

Lyl-1 (E-15): sc-46158

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 E2 α proteins. Lyl-1 and E2 α 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 kDa 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.
6. Wadman, I., et al. 1994. Specific *in vivo* association between the bHLH and LIM proteins implicated in human T cell leukemia. *EMBO J.* 13: 4831-4839.

CHROMOSOMAL LOCATION

Genetic locus: LYL1 (human) mapping to 19p13.2; Lyl1 (mouse) mapping to 8 C3.

SOURCE

Lyl-1 (E-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Lyl-1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-46158 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

Lyl-1 (E-15) is recommended for detection of Lyl-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

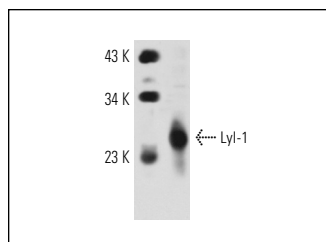
Lyl-1 (E-15) is also recommended for detection of Lyl-1 in additional species, including bovine and porcine.

Suitable for use as control antibody for Lyl-1 siRNA (h): sc-45688, Lyl-1 siRNA (m): sc-45689, Lyl-1 shRNA Plasmid (h): sc-45688-SH, Lyl-1 shRNA Plasmid (m): sc-45689-SH, Lyl-1 shRNA (h) Lentiviral Particles: sc-45688-V and Lyl-1 shRNA (m) Lentiviral Particles: sc-45689-V.

Molecular Weight of Lyl-1: 28 kDa.

Positive Controls: JM1 whole cell lysate: sc-364233 or mouse spleen extract: sc-2391.

DATA



Lyl-1 (E-15): sc-46158. Western blot analysis of Lyl-1 expression in mouse spleen tissue extract.

SELECT PRODUCT CITATIONS

1. San-Marina, S., et al. 2008. Lyl1 interacts with CREB1 and alters expression of CREB1 target genes. *Biochim. Biophys. Acta* 1783: 503-517.

RESEARCH USE

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

PROTOCOLS

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



Try **Lyl-1 (C-4): sc-374164** or **Lyl-1 (F-9): sc-390277**, our highly recommended monoclonal alternatives to Lyl-1 (E-15).