

TAL1 (G-19): sc-12983

BACKGROUND

Activation of TAL1 characterizes up to 60% of cases of human T cell acute lymphoblastic leukemia, making it the most frequent gain-of-function mutation observed in this disorder. TAL1 (also designated SCL) is a serine phosphoprotein and basic helix-loop-helix transcription factor known to regulate embryonic hematopoiesis. This transcription factor binds as a heterodimer with E2A and HEB/HTF4 to a nucleotide sequence motif termed the E-box. In addition, leukemogenesis is accelerated dramatically by transgenic coexpression of TAL1 and the catalytic subunit of casein kinase II α , a serine/threonine protein kinase known to modulate the activity of other β HLH transcription factors.

REFERENCES

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- Bash, R.O., et al. 1995. Does activation of the TAL1 gene occur in a majority of patients with T-cell acute lymphoblastic leukemia? A pediatric oncology group study. *Blood* 86: 666-676.
- Chetty, R., et al. 1996. An immunohistochemical study of TAL-1 protein expression in leukaemias and lymphomas with a novel monoclonal antibody, 2TL 242. *J. Pathol.* 178: 311-315.
- Kelliher, M.A., et al. 1996. Tal-1 induces T cell acute lymphoblastic leukemia accelerated by casein kinase II α . *EMBO J.* 15: 5160-5166.
- Huang, S., et al. 2000. mSin3A regulates murine erythroleukemia cell differentiation through association with the TAL1 (or SCL) transcription factor. *Mol. Cell. Biol.* 20: 2248-2259.

CHROMOSOMAL LOCATION

Genetic locus: TAL1 (human) mapping to 1p33; Tal1 (mouse) mapping to 4 D1.

SOURCE

TAL1 (G-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of TAL1 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-12983 X, 200 μ g/0.1 ml.

Blocking peptide available for competition studies, sc-12983 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4 $^{\circ}$ 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.

APPLICATIONS

TAL1 (G-19) is recommended for detection of TAL1 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).

TAL1 (G-19) is also recommended for detection of TAL1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for TAL1 siRNA (h): sc-36608, TAL1 siRNA (m): sc-36609, TAL1 shRNA Plasmid (h): sc-36608-SH, TAL1 shRNA Plasmid (m): sc-36609-SH, TAL1 shRNA (h) Lentiviral Particles: sc-36608-V and TAL1 shRNA (m) Lentiviral Particles: sc-36609-V.

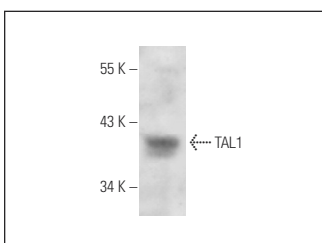
TAL1 (G-19) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of full-length TAL1: 42 kDa.

Molecular Weight of truncated TAL1: 24 kDa.

Positive Controls: HEL 92.1.7 cell lysate: sc-2270, CCRF-CEM nuclear extract: sc-2146 or Jurkat nuclear extract: sc-2132.

DATA



TAL1 (G-19): sc-12983. Western blot analysis of TAL1 expression in HEL 92.1.7 whole cell lysate.

PROTOCOLS

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

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Try **TAL1 (C-4): sc-393287** or **TAL1 (B-8): sc-393288**, our highly recommended monoclonal alternatives to TAL1 (G-19).