

TAL1 (E-14): sc-12982

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.

CHROMOSOMAL LOCATION

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

SOURCE

TAL1 (E-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-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-12982 X, 200 μ g/0.1 ml.

Blocking peptide available for competition studies, sc-12982 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TAL1 (E-14) 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 (E-14) is also recommended for detection of TAL1 in additional species, including 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 (E-14) 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: TAL1 (h): 293T Lysate: sc-172270, NIH/3T3 nuclear extract: sc-2138 or K-562 nuclear extract: sc-2130.

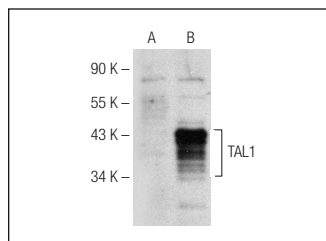
RESEARCH USE

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

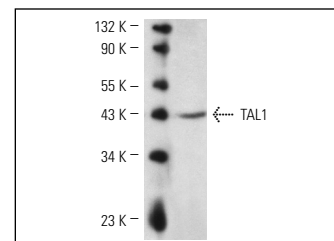
STORAGE

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

DATA



TAL1 (E-14): sc-12982. Western blot analysis of TAL1 expression in non-transfected: sc-117752 (A) and human TAL1 transfected: sc-172270 (B) 293T whole cell lysates.



TAL1 (E-14): sc-12982. Western blot analysis of TAL1 expression in NIH/3T3 nuclear extract.

SELECT PRODUCT CITATIONS

- Okada, Y., et al. 2003. Homeodomain proteins Meis1 and PBXs regulate the lineage-specific transcription of the platelet factor 4 gene. *Blood* 101: 4748-4756.
- Rodriguez, P., et al. 2005. GATA-1 forms distinct activating and repressive complexes in erythroid cells. *EMBO J.* 24: 2354-2366.
- Babina, M., et al. 2005. The transcription factor profile of human mast cells in comparison with monocytes and granulocytes. *Cell. Mol. Life Sci.* 62: 214-226.
- Rodriguez, P., et al. 2006. Isolation of transcription factor complexes by *in vivo* biotinylation tagging and direct binding to streptavidin beads. *Methods Mol. Biol.* 338: 305-323.
- Ghinassi, B., et al. 2007. Interleukin-3 and erythropoietin cooperate in the regulation of the expression of erythroid-specific transcription factors during erythroid differentiation. *Exp. Hematol.* 35: 735-747.
- Dey, S., et al. 2010. The TAL1/SCL transcription factor regulates cell cycle progression and proliferation in differentiating murine bone marrow monocyte precursors. *Mol. Cell. Biol.* 30: 2181-2192.

PROTOCOLS

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Try **TAL1 (C-4): sc-393287** or **TAL1 (B-8): sc-393288**, our highly recommended monoclonal alternatives to TAL1 (E-14).