

TCL-1A (A-6): sc-393436



The Power to Question

BACKGROUND

T cell leukemia/lymphoma protein 1A (TCL-1A), also known as p14^{TCL1}, is a product of the TCL1 gene that is involved in T cell prolymphocytic leukemia (T-PLL). T-PLL is a rare form of mature T cell leukemia, which is consistently associated with chromosomal rearrangements characterized by the juxtaposition of the TCRA locus on chromosome 14q11.2 and the TCL1 gene on 14q32.13. TCL-1A is a member of a unique family of β -barrel proteins that bind small hydrophobic ligands and function in cell regulation. TCL-1A is an all- β protein containing an eight-stranded antiparallel β -barrel which consists of two four-stranded β -meander motifs. The two motifs are related by a twofold axis and connected by a long loop. TCL-1A forms a tight crystallographic dimer. TCL-1A is expressed in pre-B cells, in immature thymocytes, at low levels in activated T cells and in the cytoplasm.

REFERENCES

- Gritti, C., et al. 1998. Transgenic mice for MTCP1 develop T cell prolymphocytic leukemia. *Blood* 92: 368-373.
- Fu, Z.Q., et al. 1998. Crystal structure of MTCP-1: implications for role of TCL-1 and MTCP-1 in T cell malignancies. *Proc. Natl. Acad. Sci. USA* 95: 3413-3418.
- Hoh, F., et al. 1998. Crystal structure of p14^{TCL1}, an oncogene product involved in T cell prolymphocytic leukemia, reveals a novel β -barrel topology. *Structure* 6: 147-155.
- Du Bois, G.C., et al. 1998. Purification and characterization of recombinant forms of TCL-1 and MTCP-1 proteins. *Protein Expr. Purif.* 12: 215-225.
- Yang, Y.S., et al. 1998. Solution structure of the recombinant human oncoprotein p13^{MTCP1}. *J. Biomol. NMR* 11: 337-354.

CHROMOSOMAL LOCATION

Genetic locus: TCL1A (human) mapping to 14q32.13; Tcl1 (mouse) mapping to 12 E.

SOURCE

TCL-1A (A-6) is a mouse monoclonal antibody raised against amino acids 1-70 mapping at the N-terminus of TCL-1A of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TCL-1A (A-6) is available conjugated to agarose (sc-393436 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393436 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393436 PE), fluorescein (sc-393436 FITC), Alexa Fluor[®] 488 (sc-393436 AF488), Alexa Fluor[®] 546 (sc-393436 AF546), Alexa Fluor[®] 594 (sc-393436 AF594) or Alexa Fluor[®] 647 (sc-393436 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-393436 AF680) or Alexa Fluor[®] 790 (sc-393436 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

TCL-1A (A-6) is recommended for detection of TCL-1A of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (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 TCL-1A siRNA (h): sc-42988, TCL-1A siRNA (m): sc-42989, TCL-1A shRNA Plasmid (h): sc-42988-SH, TCL-1A shRNA Plasmid (m): sc-42989-SH, TCL-1A shRNA (h) Lentiviral Particles: sc-42988-V and TCL-1A shRNA (m) Lentiviral Particles: sc-42989-V.

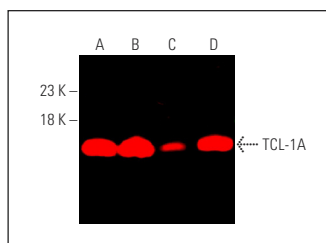
Molecular Weight of TCL-1A: 14 kDa.

Positive Controls: NAMALWA cell lysate: sc-2234, U-698-M whole cell lysate: sc-364799 or JM1 whole cell lysate: sc-364233.

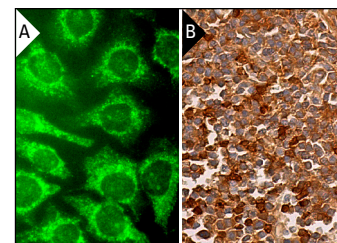
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



TCL-1A (A-6): sc-393436. Near-infrared western blot analysis of TCL-1A expression in JM1 (A), NAMALWA (B), Raji (C) and U-698-M (D) whole cell lysates. Blocked with UltraCruz[®] Blocking Reagent: sc-516214. Detection reagent used: m-IgG κ BP-CFL 790: sc-516181.



TCL-1A (A-6): sc-393436. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing cytoplasmic staining of cells in germinal center and cells in non-germinal center. Note nuclear staining of a subset of lymphoid cells (B).

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.