

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

## BACKGROUND

T cell leukemia/lymphoma protein 1A (TCL-1A), also known as p14<sup>TCL1</sup>, 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  $\beta$ -barrel proteins that bind small hydrophobic ligands and function in cell regulation. TCL-1A is an all- $\beta$  protein containing an eight-stranded antiparallel  $\beta$ -barrel which consists of two four-stranded  $\beta$ -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.

## 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  $\mu$ g IgG<sub>1</sub> 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  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393436 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393436 PE), fluorescein (sc-393436 FITC), Alexa Fluor<sup>®</sup> 488 (sc-393436 AF488), Alexa Fluor<sup>®</sup> 546 (sc-393436 AF546), Alexa Fluor<sup>®</sup> 594 (sc-393436 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-393436 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-393436 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-393436 AF790), 200  $\mu$ 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  $\mu$ g per 100-500  $\mu$ 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.

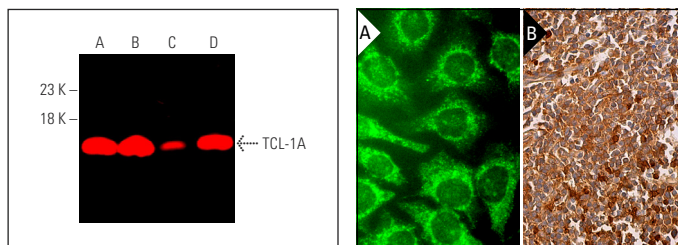
Molecular Weight of TCL-1A: 14 kDa.

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 $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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 $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG $\kappa$  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<sup>®</sup> Blocking Reagent: sc-516214. Detection reagent used: m-IgG $\kappa$  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).

## SELECT PRODUCT CITATIONS

- Xie, W., et al. 2024. TCL1A-expressing B cells are critical for tertiary lymphoid structure formation and the prognosis of oral squamous cell carcinoma. *J. Transl. Med.* 22: 477.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.