

TCL-1A (1-21): sc-32331

BACKGROUND

T-cell leukemia/lymphoma protein 1A (TCL-1A), also known as p14TCL1 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 and the TCL1A 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.

CHROMOSOMAL LOCATION

Genetic locus: TCL1A (human) mapping to 14q32.13.

SOURCE

TCL-1A (1-21) is a mouse monoclonal antibody raised against amino acids 60-73 of TCL-1A of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TCL-1A (1-21) is available conjugated to agarose (sc-32331 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-32331 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-32331 PE), fluorescein (sc-32331 FITC), Alexa Fluor® 488 (sc-32331 AF488), Alexa Fluor® 546 (sc-32331 AF546), Alexa Fluor® 594 (sc-32331 AF594) or Alexa Fluor® 647 (sc-32331 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-32331 AF680) or Alexa Fluor® 790 (sc-32331 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

TCL-1A (1-21) is recommended for detection of TCL-1A of 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for TCL-1A siRNA (h): sc-42988, TCL-1A shRNA Plasmid (h): sc-42988-SH and TCL-1A shRNA (h) Lentiviral Particles: sc-42988-V.

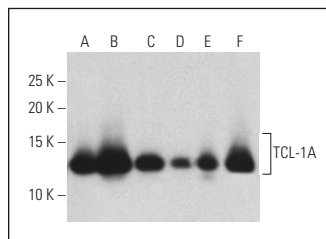
Molecular Weight of TCL-1A: 14 kDa.

Positive Controls: U-698-M whole cell lysate: sc-364799, BJAB whole cell lysate: sc-2207 or NAMALWA cell lysate: sc-2234.

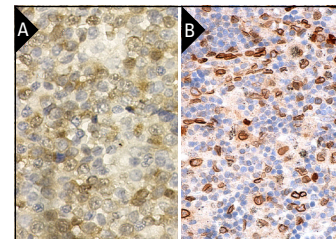
STORAGE

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

DATA



TCL-1A (1-21): sc-32331. Western blot analysis of TCL-1A expression in NAMALWA (A), Ramos (B), Raji (C), BJAB (D), U-698-M (E) and JM1 (F) whole cell lysates. Detection reagent used: m-IgGκ: BP-HRP: sc-516102.



TCL-1A (1-21): sc-32331. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymphoma showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing membrane and cytoplasmic staining of subset of non-germinal center cells (B).

SELECT PRODUCT CITATIONS

- Pekarsky, Y., et al. 2008. TCL-1 functions as a transcriptional regulator and is directly involved in the pathogenesis of CLL. *Proc. Natl. Acad. Sci. USA* 105: 19643-19648.
- Efanov, A., et al. 2010. CD5+CD23+ leukemic cell populations in TCL1 transgenic mice show significantly increased proliferation and Akt phosphorylation. *Leukemia* 24: 970-975.
- Visone, R., et al. 2011. miR-181b is a biomarker of disease progression in chronic lymphocytic leukemia. *Blood* 118: 3072-3079.
- Nichele, I., et al. 2012. VR09 cell line: an EBV-positive lymphoblastoid cell line with *in vivo* characteristics of diffuse large B cell lymphoma of activated B-cell type. *PLoS ONE* 7: e52811.
- Gaudio, E., et al. 2012. Tcl1 interacts with Atm and enhances NFκB activation in hematologic malignancies. *Blood* 119: 180-187.
- Gaudio, E., et al. 2013. Heat shock protein 70 regulates Tcl1 expression in leukemia and lymphomas. *Blood* 121: 351-359.
- Guo, S., et al. 2014. EZH2 mutations in follicular lymphoma from different ethnic groups and associated gene expression alterations. *Clin. Cancer Res.* 20: 3078-3086.
- Mizuno, S., et al. 2015. Overexpression of salivary-type amylase reduces the sensitivity to bortezomib in multiple myeloma cells. *Int. J. Hematol.* 102: 569-578.
- Pardanani, A., et al. 2016. CD123 immunostaining patterns in systemic mastocytosis: differential expression in disease subgroups and potential prognostic value. *Leukemia* 30: 914-918.

RESEARCH USE

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