

TCL-1B (NDOG1): sc-57478

BACKGROUND

T cell leukemia/lymphoma protein 1B (TCL-1B), also designated TML1, TCL/MTCP1-like 1, syncytiotrophoblast-specific protein and SYN-1, is involved in T cell prolymphocytic leukemia (T-PLL). TCL-1B is located within the region on human chromosome 14q32.1 which, in T cell leukemias and lymphomas, is frequently involved in chromosomal translocations and inversions with one of the T cell receptor loci. TCL-1B is activated by chromosomal rearrangements involving the TCL1 locus. In mouse, TCL-1B is represented by five homologues, TCL-1B1–TCL-1B5. The crystal structure of TCL-1B suggests that it may play a role in the transport of small molecules such as retinoids, nucleotides and fatty acids. TCL-1B is found in both the nucleus and the cytoplasm of normal bone marrow and peripheral lymphocytes.

REFERENCES

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2. Fu, Z.Q., Du Bois, G.C., Song, S.P., Kulikovskaya, I., Virgilio, L., Rothstein, J.L., Croce, C.M., Weber, I.T. and Harrison, R.W. 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.
3. Sugimoto, J., Hatakeyama, T., Narducci, M.G., Russo, G. and Isobe, M. 1999. Identification of the TCL1/MTCP1-like 1 (TML1) gene from the region next to the TCL1 locus. *Cancer Res.* 59: 2313-2317.
4. Pekarsky, Y., Hallas, C., Isobe, M., Russo, G. and Croce, C.M. 1999. Abnormalities at 14q32.1 in T cell malignancies involve two oncogenes. *Proc. Natl. Acad. Sci. USA* 96: 2949-2951.
5. Hallas, C., Pekarsky, Y., Itoyama, T., Varnum, J., Bichi, R., Rothstein, J. and Croce, C.M. 1999. Genomic analysis of human and mouse TCL1 loci reveals a complex of tightly clustered genes. *Proc. Natl. Acad. Sci. USA* 96: 14418-14423.
6. Pekarsky, Y., Koval, A., Hallas, C., Bichi, R., Tresini, M., Malstrom, S., Russo, G., Tschlis, P. and Croce, C.M. 2000. TCL-1 enhances Akt kinase activity and mediates its nuclear translocation. *Proc. Natl. Acad. Sci. USA* 97: 3028-3033.

CHROMOSOMAL LOCATION

Genetic locus: TCL1B (human) mapping to 14q32.13.

SOURCE

TCL-1B (NDOG1) is a mouse monoclonal antibody raised against trophoblast membranes of human origin.

PRODUCT

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

RESEARCH USE

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

APPLICATIONS

TCL-1B (NDOG1) is recommended for detection of TCL-1B of human origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10⁶ cells).

Suitable for use as control antibody for TCL-1B siRNA (h): sc-42990, TCL-1B shRNA Plasmid (h): sc-42990-SH and TCL-1B shRNA (h) Lentiviral Particles: sc-42990-V.

Molecular Weight of TCL-1B: 14 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
 1) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

SELECT PRODUCT CITATIONS

1. Valderrama, J.F.N., Gil, V.C., Alzate B, V., Tavera, E.A., Noreña, E., Porras, J., Quintana-Castillo, J.C., García L, J.J., Molina P, F.J., Ramos-Contreras, C. and Sanchez, J.B. 2022. Effects of polycyclic aromatic hydrocarbons on gestational hormone production in a placental cell line: Application of passive dosing to in vitro tests. *Ecotoxicol. Environ. Saf.* 245: 114090.

STORAGE

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

PROTOCOLS

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