

TdT (SEN28): sc-59393

BACKGROUND

Terminal deoxynucleotidyltransferase (TdT) is a DNA polymerase which catalyzes the addition of deoxyribonucleotides onto the 3'-hydroxyl end of DNA primers without template direction. The enzyme thus provides a unique method for the labeling of the 3' termini of DNA. The human TdT gene maps to chromosome 10q24.1 and encodes a 510 amino acid protein. Human TdT is synthesized as a single chain peptide that elicits a minor preference for incorporation of deoxyribonucleotides over ribonucleotides forming DNA strands. TdT is present in immature thymocytes, some bone marrow cells, transformed pre-B and pre-T cell lines, and leukemia cells.

REFERENCES

1. Bentolila, L.A., et al. 1997. Constitutive expression of terminal deoxynucleotidyl transferase in transgenic mice is sufficient for N region diversity to occur at any Ig locus throughout B cell differentiation. *J. Immunol.* 158: 715-723.
2. Marshall, A.J., et al. 1998. Terminal deoxynucleotidyl transferase expression during neonatal life alters D(H) reading frame usage and Ig-receptor-dependent selection of V regions. *J. Immunol.* 161: 6657-6663.
3. Nourrit, F., et al. 1999. Methylation of the promoter region may be involved in tissue-specific expression of the mouse terminal deoxynucleotidyl transferase gene. *J. Mol. Biol.* 292: 217-227.
4. Aono, A., et al. 2000. Forced expression of terminal deoxynucleotidyl transferase in fetal thymus resulted in a decrease in γ/δ T cells and random dissemination of V γ 3V δ 1 T cells in skin of newborn but not adult mice. *Immunology* 99: 489-497.
5. Feeney, A.J., et al. 2001. Terminal deoxynucleotidyl transferase deficiency decreases autoimmune disease in MRL-Fas (lpr) mice. *J. Immunol.* 167: 3486-3493.
6. Boule, J.B., et al. 2001. Terminal deoxynucleotidyl transferase indiscriminately incorporates ribonucleotides and deoxyribonucleotides. *J. Biol. Chem.* 276: 31388-31393.
7. Mahajan, K.N., et al. 2003. Role of human Pso4 in mammalian DNA repair and association with terminal deoxynucleotidyl transferase. *Proc. Natl. Acad. Sci. USA* 100: 10746-10751.
8. Peralta-Zaragoza, O., et al. 2004. Terminal deoxynucleotidyl transferase is downregulated by AP-1-like regulatory elements in human lymphoid cells. *Immunology* 111: 195-203.

CHROMOSOMAL LOCATION

Genetic locus: DNNT (human) mapping to 10q24.1.

SOURCE

TdT (SEN28) is a mouse monoclonal antibody raised against purified full length TdT of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 250 μ l culture supernatant containing IgG₁ with < 0.1% sodium azide.

APPLICATIONS

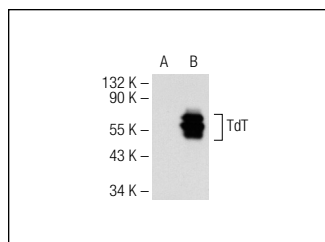
TdT (SEN28) is recommended for detection of TdT of human origin by Western Blotting (starting dilution to be determined by researcher, dilution range undiluted-1:500), immunofluorescence (starting dilution to be determined by researcher, dilution range undiluted-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution to be determined by researcher, dilution range undiluted-1:500).

Suitable for use as control antibody for TdT siRNA (h): sc-44143, TdT shRNA Plasmid (h): sc-44143-SH and TdT shRNA (h) Lentiviral Particles: sc-44143-V.

Molecular Weight of TdT: 58 kDa.

Positive Controls: TdT (h2): 293T Lysate: sc-170212.

DATA



TdT (SEN28): sc-59393. Western blot analysis of TdT expression in non-transfected: sc-117752 (A) and human TdT transfected: sc-170212 (B) 293T whole cell lysates.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

PROTOCOLS

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