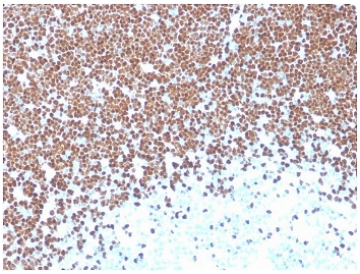
TdT Antibody-Microarray Validated / DNA nucleotidylexotransferase [clone TDT/1393] (V8399)

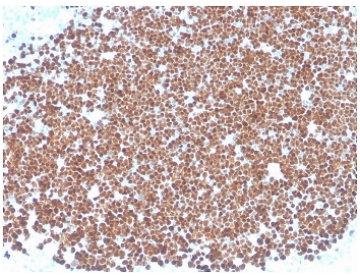
Catalog No.	Formulation	Size
V8399-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V8399-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V8399SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

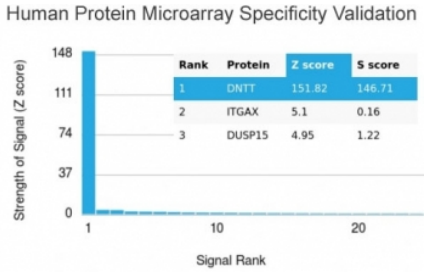
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	TDT/1393
Purity	Protein G affinity chromatography
UniProt	P04053
Localization	Nucleus
Applications	ELISA : 2-4ug/ml for coating; order Ab without BSA Immunohistochemistry (FFPE) : 1-2ug/ml for 30 minutes at RT
Limitations	This TdT antibody is available for research use only.



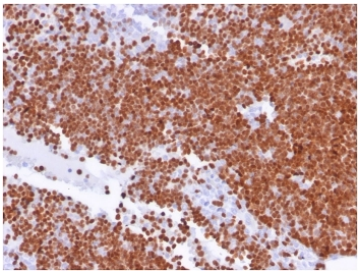
TdT Antibody Thymus IHC. Immunohistochemistry of TdT antibody in human thymus tissue. Formalin-fixed, paraffin-embedded human thymus demonstrates strong nuclear staining in immature cortical thymocytes, consistent with Terminal deoxynucleotidyl transferase expression in developing T lymphoblasts. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 minutes followed by cooling prior to staining. The microarray-validated monoclonal antibody clone TDT/1393 was used as the primary antibody, showing distinct nuclear localization in thymic precursor cells.



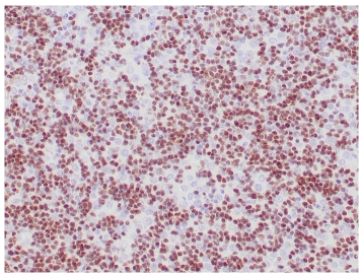
TdT Antibody Human Thymus Tissue Immunohistochemistry. IHC staining of FFPE human thymus with TdT antibody (clone TDT/1393). HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



TdT Antibody Microarray Specificity Validation. HuProt(TM) human protein microarray specificity analysis of TdT antibody. A HuProt(TM) microarray containing more than 19,000 full-length human proteins was probed with TdT antibody (clone TDT/1393) to assess binding specificity. The microarray-validated monoclonal antibody clone TDT/1393 demonstrates strong and selective signal for DNTT compared with other proteins on the array. Z-score represents the signal strength generated by antibody binding to a specific protein relative to the mean signal across the array, expressed in standard deviations above the mean. When proteins are ranked by descending Z-score, the S-score reflects the difference in standard deviations between consecutive targets and therefore indicates relative target specificity. The high Z- and S-scores observed for DNTT support the specificity profile of this TdT antibody.



TdT Antibody FFPE Thymus Tissue Immunohistochemistry. IHC analysis of FFPE human thymus with TdT antibody (clone TDT/1393). HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



TdT Antibody Thymoma IHC. Immunohistochemistry of TdT antibody in human thymoma tissue. Formalin-fixed, paraffin-embedded human thymoma shows diffuse nuclear staining in neoplastic lymphoid cells, consistent with Terminal deoxynucleotidyl transferase expression in immature T cell populations. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 minutes followed by cooling prior to staining. The microarray-validated monoclonal antibody clone TDT/1393 was used as the primary antibody, demonstrating strong nuclear localization within tumor-associated thymocytes.

Description

TdT antibody, also known as Terminal deoxynucleotidyl transferase antibody, recognizes a specialized nuclear DNA polymerase encoded by the DNTT gene on chromosome 10q23-q24. This microarray-validated monoclonal antibody (clone TDT/1393) detects Terminal deoxynucleotidyl transferase, commonly referred to as TdT, a member of the DNA polymerase X family selectively expressed in immature lymphoid cells. TdT antibody, also referred to as DNTT antibody and Terminal transferase antibody in the literature, is widely used in research focused on lymphoid differentiation and hematologic malignancies. This antibody is part of a collection of Human Protein Microarray validated antibodies that have been screened for specificity across thousands of proteins.

Terminal deoxynucleotidyl transferase catalyzes the template-independent addition of deoxynucleotides to the 3-prime hydroxyl ends of DNA during V(D)J recombination. This distinctive activity introduces N-region nucleotide diversity within immunoglobulin and T cell receptor gene segments, significantly expanding antigen receptor repertoire complexity. TdT functions within nuclear recombination centers in coordination with RAG1 and RAG2 complexes and other components of the non-homologous end joining pathway. Its catalytic core contains conserved polymerase domains characteristic of the

Pol X family, enabling nucleotide incorporation without requiring a DNA template. A TdT antibody therefore supports studies of adaptive immune system development and receptor gene assembly.

DNTT expression is tightly regulated and largely restricted to early B and T lymphoblasts in bone marrow and thymus. In thymic cortex, TdT-positive cells represent developing T cell precursors undergoing receptor rearrangement. Expression decreases as lymphocytes mature, making TdT a well-established marker of lymphoid immaturity. Elevated nuclear TdT expression is frequently observed in acute lymphoblastic leukemia and lymphoblastic lymphoma, where TdT antibody detection supports investigation of leukemic blast populations and lymphoid neoplasia biology.

Structurally, TdT contains regulatory regions that influence substrate selection and protein-protein interactions within recombination complexes. Alternative splicing of DNTT can generate isoforms with subtle biochemical differences that may affect catalytic efficiency and regulation. Persistent or dysregulated expression of DNTT contributes to genomic variability and is implicated in lymphoid malignancy development. Through its central role in generating immune receptor diversity, TdT remains essential to both normal lymphopoiesis and disease-oriented research applications.

This antibody is part of a broader antibody panel offered by NSJ Bioreagents.

Application Notes

Optimal dilution of the TdT antibody-microarray validated should be determined by the researcher.

Immunogen

A portion of amino acids 52-192 from the human protein was used as the immunogen for the TdT antibody-microarray validated.

Storage

Store the TdT antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

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