abcam

ab183341

Anti-TdT antibody [SP150]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.6 Preservative: 0.1% Sodium azide Constituents: PBS, 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	SP150
Purification technique	Affinity purification Protein A/G
Concentration	0.05 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified from TCS by protein A/G.

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/100
Notes	Boil tissue section in 1mM EDTA buffer, pH 8.0 for 10 min followed by cooling at room temperature for 20 min.

Perform heat-mediated antigen retrieval before commencing with IHC staining protocol.

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

WB

Tested

Species	Human
Dilution info	1/100
Notes	-

Target data

See full target information DNTT

Function Template-independent DNA polymerase which catalyzes the random addition of deoxynucleoside 5'-triphosphate to the 3'-end of a DNA initiator. One of the in vivo functions of this enzyme is the addition of nucleotides at the junction (N region) of rearranged Ig heavy chain and T-cell receptor gene segments during the maturation of B- and T-cells.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C

Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	The target protein TdT also known as terminal deoxynucleotidyl transferase or DNTT is an enzyme with a mass of approximately 58 kDa. TdT is specifically expressed in the thymus and bone marrow during early B and T lymphocyte development. This enzyme adds nucleotides to the 3’ ends of DNA contributing to the diversity of the immune response by introducing variability at the junctions of gene segments.
Biological function summary	Terminal deoxynucleotidyl transferase plays an important role in the adaptive immune system. By adding random nucleotides to the V(D)J regions during the development of T and B cells it enhances the variability of antigen receptors. Although TdT does not form part of a larger protein complex its activity directly influences the effectiveness of antigen recognition by lymphocytes important for immune surveillance and response.
Pathways	Terminal deoxynucleotidyl transferase fits into the V(D)J recombination pathway which is essential for the assembly of diverse antigen receptor genes in immature lymphocytes. This enzyme works in conjunction with proteins like RAG1/RAG2 which initiate the DNA cleavage process necessary for recombination and with DNA ligase IV for the joining stage. Enhanced diversity generated by TdT's activity substantiates an effective and adaptable immune response.
Associated diseases and disorders	TdT is associated with lymphoid malignancies such as acute lymphoblastic leukemia (ALL) where its expression acts as a diagnostic marker. Overexpression or dysregulation of TdT often found in these leukemias correlates with abnormal lymphocyte proliferation. TdT involvement in these disorders is linked to abnormal p53 pathways as p53 mutation frequently occurs alongside abnormal TdT activity suggesting a connection to cellular growth and survival dysregulation in affected cells.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

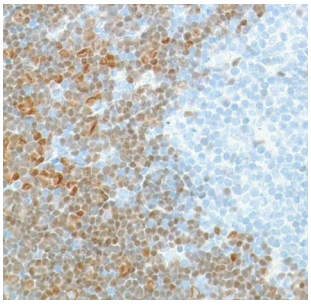
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In the unlikely event of one of our products not working as expected, you are covered by our product promise.

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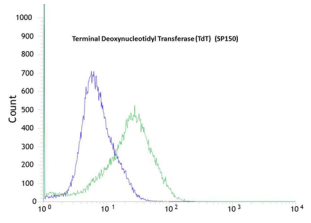
4 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TdT antibody [SP150] (ab183341)

TdT Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-TdT antibody

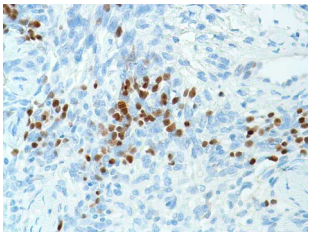
Immunohistochemical analysis of paraffin-embedded human thymus tissue labeling TdT with ab183341 at a 1/100 dilution.



Flow Cytometry (Intracellular) - Anti-TdT antibody [SP150] (ab183341)

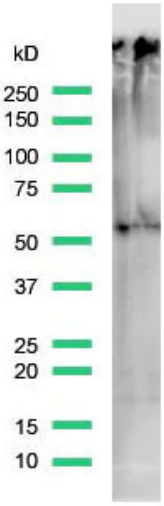
TdT Flow Cytometry (Intracellular) staining using rabbit Anti-TdT antibody

Flow cytometric analysis of Jurkat (Human T cell leukemia cell line from peripheral blood) cells labeling TdT with ab183341 (green) compared with a negative control of rabbit IgG (blue).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TdT antibody [SP150] (ab183341)

Immunohistochemical analysis of paraffin-embedded human thymoma tissue labeling TdT with ab183341 at a 1/100 dilution.



Western blot - Anti-TdT antibody [SP150] (ab183341)

All lanes:
Western blot - Anti-TdT antibody [SP150] (ab183341) at 1/100 dilution

All lanes:
Jurkat (Human T cell leukemia cell line from peripheral blood) cell lysate

Predicted band size: 59 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.