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Terminal Deoxynucleotidyl Transferase (TdT)

Cat #: PRP3002 Size: 40 μg/ 100 μg /1 mg

Product Information

	Product Name: Terminal Deoxynucleotidyl Transferase (TdT)		
REF	**Catalog Number:** PRP3002	LOT	**Lot Number:** Refer to product label
	Purity: > 90% as determined by SDS-PAGE		
	Storage: Store at -20°C		**Expressed Host:** E. coli
	Shipping: Gel pack with blue ice		

Background: Terminal deoxynucleotidyl transferase (TdT), also known as terminal transferase, is a specialized DNA polymerase expressed in immature, pre-B, pre-T lymphoid cells, and acute lymphoblastic leukemia/lymphoma cells. Generally, TdT catalyses the addition of nucleotides to the 3' terminus of a DNA molecule. Unlike most DNA polymerases, it does not require a template. The preferred substrate of this enzyme is a 3'-overhang, but it can also add nucleotides to blunt or recessed 3' ends.

Sequence: Amino acid sequence derived from Bovine TdT (X04122) (Mer1-Ala520) was expressed.

Protein length: The recombinant Bovine TdT consists of 520 amino acids and migrates with an apparent molecular mass of 58.3 kDa as estimated in SDS-PAGE under reducing conditions.

Unit Definition: One unit of the enzyme catalyzes the incorporation of 1 nmol of deoxythymidylate into a polynucleotide fraction in 60 min at 37°C.

Storage buffer: Liquid in sterile 50 mM K_2HPO_4, 100 mM NaCl, 1 mM DTT, 0.1% Tween20, 1% BSA, 50% Glycerol, pH 6.5.

Formulation:

Components	Size 1	Size 2	Size 3
Terminal Deoxynucleotidyl Transferase (TdT), 1 mg/mL	40 μg	100 μg	1 mg
Equilibration Buffer (5×)	0.5 mL	1 mL	1 mLx10

Equilibration Buffer (5×): 1 M potassium cacodylate, 125 mM Tris, 1 mM DTT, 5 mM $CoCl_2$.

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Usage notes: The Equilibration Buffer (5×) stock solution is stored at low temperature, resulting in a small amount of component precipitation. Please invert and mix before use. And Equilibration Buffer (5×) contains cacodylate and cobalt chloride, highly toxic chemicals. After contact with skin, wash immediately with plenty of water. In case of accident or if you feel unwell, seek medical advice immediately.

Reference system of TUNEL： Equilibration Buffer (5×) 10 μL

Fluorescence-labeled dUTP 5 μL

ddH_2O 33 μL

Terminal Deoxynucleotidyl Transferase (TdT) 2 μL

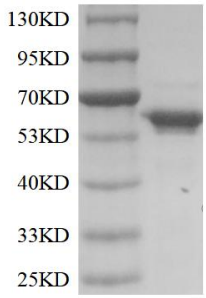

Fig.1. SDS-PAGE analysis of Terminal Deoxynucleotidyl Transferase.

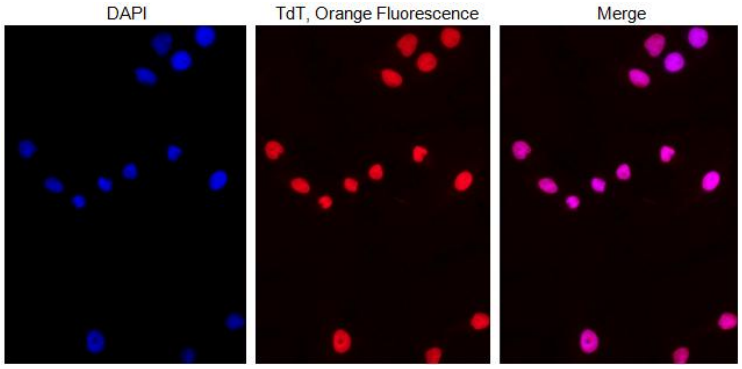

Fig.2. Fluorescence images using TdT and Fluorescence-labeled dUTP in Hela cells with the treatment of 10 U/mL Dnase I for 10min. The cells were counterstained with DAPI.

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