TECHNICAL DATA SHEET

Terminal deoxynucleotidyl transferase

TdT Synthesis Panel

Product Code: TdTPanel - 6 x 250µL

PRODUCT DESCRIPTION

Terminal deoxynucleotidyl transferase (TdT) is a recombinant, template-independent polymerase that catalyzes the addition of deoxynucleotides to the 3' hydroxyl terminus of DNA molecules. Thanks to its ability to polymerize nucleotides in an untemplated fashion, TdT has become a promising solution for DNA synthesis using an enzymatic approach.

Manufactured to yield a purified and specific enzyme free from bacterial DNA contamination, our TdTs are suitable for enzymatic DNA & RNA synthesis workflows.

TdT Synthesis Panel features six proprietary Terminal deoxynucleotidyl transferases (TdTs) engineered to have unique characteristics for evaluation and exploration in DNA and RNA synthesis workflows:

- High coupling efficiency for natural DNA nucleotides
- High coupling efficiency for 3'-reversibly-blocked DNA nucleotides
- High coupling efficiency for natural RNA nucleotides
- Thermostability
- Broad pH resistance (pH 5-9)

PRODUCT APPLICATIONS

- Enzymatic DNA and RNA Synthesis

SHIPPING AND STORAGE

TdT Synthesis Panel has been designed by Kura Biotech to be transported stable within a temperature range of 4°C to 8°C. If the shipment takes longer than 24 hours, the temperature must not exceed -20 °C during transport. Upon receipt, the product should be immediately stored at -20°C. To preserve enzyme activity for extended periods, storage at -80°C is recommended.

To ensure optimal kit performance, please follow the following guideline:

- Store the components according to the specifications on each vial's label or follow the instructions in this manual. Avoid repeated freeze-thaw cycles.
- If any kit components were damaged during transportation, contact Kura Biotech. Do not use damaged or expired components as it may compromise performance.

Components	Volume	Concentration	Storage T°
TdT A	250 µL	10 µM	-20°C
TdT B	250 µL	10 µM	
TdT C	250 µL	10 µM	
TdT D	250 µL	10 µM	
TdT E	250 µL	10 µM	
TdT F	250 µL	10 µM	
Reaction Buffer	2 x 1.5 mL	10X	
CoCl2	1ml	0.1M	

Visit us at www.blikka.com or write to us help@blikka.com
US OFFICE 1201 West Peachtree Street NW, Suite 2625, Atlanta, Georgia 30309 - US/Canada + 800 332 1448
CHILE OFFICE Ave Gramado Interior 1410, Parcela 20, Puerto Varas - Chile +56 (65) 223 4655

Jun 9, 2025 V1

TdT Synthesis Panel Enzymes	Features				
	Coupling efficiency			Thermostability	pH resistance range
	Natural DNA nucleotides (dNTPs)	Modified DNA nucleotides (3'O-NH2 reversibly blocked dNTPs)	Natural RNA nucleotides (rNTPs)	Tm	
TdT A	✦✦✦✦	✦✦✦✦	✦✦✦	54°C	pH 5-9
TdT B*	✦✦	✦✦	✦✦	46°C	
TdT C	✦✦✦	✦✦✦	✦✦✦✦✦	51°C	
TdT D	✦✦	✦✦✦	✦✦✦	52°C	
TdT E	✦✦	✦	✦✦	38°C	
TdT F	✦	✦✦✦✦✦	✦✦✦✦	48°C	

Protocol

Components	25 µL reaction	Final Concentration
dH2O	13.4 µL	-
Buffer 10x	2.5 µL	1x
CoCl2	0.5 µL	2 mM
Oligo	0.5 µL	2 µM
Nucleotide	2.5 µL	20 µM
Pyrophosphatase	0.625 µL	0.01 U
TdT	5 µL	2 µM

Notes

Combine all components and incubate at 37 °C for 5–30 minutes. Then, quench the reaction by heating at 95 °C for 5 minutes.

Visit us at www.blikka.com or write to us help@blikka.com
US OFFICE 1201 West Peachtree Street NW, Suite 2625, Atlanta, Georgia 30309 - US/Canada + 800 332 1448
CHILE OFFICE Ave Gramado Interior 1410, Parcela 20, Puerto Varas - Chile +56 (65) 223 4655

Jun 9, 2025 V2