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Terminal Deoxynucleotidyl Transferase (TdT)

1 Packing list

Components	HY-KE8006-1000U
Terminal Deoxynucleotidyl Transferase	50 μL
10× TdT Reaction Buffer	1 mL

2 Introduction

Terminal Deoxynucleotidyl Transferase (TdT) is a template-independent DNA polymerase that catalyzes the binding of deoxynucleotides to the 3' hydroxyl end of oligonucleotides, single-stranded DNA, or double-stranded DNA. The TdT reaction requires a short sequence containing at least 3 bases as a primer. When using RNA as a template, the performance of TdT strictly depends on the tertiary structure of the 3'-end of the acceptor RNA and the type of nucleotide. Generally, TdT acts less efficiently on RNA templates than on DNA templates. TdT has a molecular weight of 58.3kDa and has no 5' and 3' exonuclease activities. Adding Co2+ to the reaction can improve the tailing efficiency.

3 Properties

Concentration	20 U/μL
Unit definition	One unit refers to the amount of enzyme required to catalyze the addition of 1 nmol dNTP to the 3' hydroxyl end of a polynucleotide within 60 minutes at 37°C.
1× TdT Reaction Buffer	100 mM KCl, 30 mM Tris-acera, 0.05% (v/v) Triton X-100 (pH 7.5 at 25 °C).
Cofactor	Co^{2+}
Heat inactivation	65°C, 15min

4 Storage

-20°C，1 year

5 Precautions

1. The enzyme has high activity at 20~40°C and reacts for 5~10min.
2. The efficiency of TdT on RNA template is lower than that on DNA template.
3. This product is for R&D use only, not for drug, household, or other uses.
4. For your safety and health, please wear a lab coat and disposable gloves to operate.