

Product Components

Components	Component number	Size-1	Size -2
		10 RXN	50 RXN
Mth RNA Ligase (50 µM)	RM21518	20 µL	100 µL
10X 5' DNA Adenylation Reaction Buffer	RM20838	1 mL	1 mL
ATP (1 mM)	RM20156	100 µL	100 µL

Product Description

Mth RNA Ligase is used to produce 5'-adenylated DNA. This kit has been optimized to generate adenylated DNA regardless of whether the sequence contains a 3' end terminator, and it can convert 95% of pDNA into AppDNA.

Enzymatic adenylation of single-stranded DNA adapters at the 5' end for next-generation sequencing.

Product Source

An *E. coli* strain that carries a plasmid encoding the engineered *Mth RNA Ligase* gene.

Storage Temperature

-20°C.

Heat Inactivation

85°C for 5 minutes.

Instructions

Protocol for Oligonucleotide Adenylation:

1. Set up the following reaction in a microcentrifuge tube on ice. (For 20 µL reaction system).

Components	Amount
10X 5' DNA Adenylation Reaction Buffer	2 µL
Phosphorylated DNA Oligonucleotide	100 pmol
1 mM ATP	2 µL
Mth RNA Ligase (50 µM)	2 µL
ddH ₂ O	Up to 20 µL

2. Gently mix the reaction by pipetting up and down and microfuge briefly.
3. Incubate between 65°C for 1 hour.
4. (Optional) Heat inactivate at 85°C for 5 minutes.
5. Transfer to ice and use for subsequent reactions as soon as possible. Alternatively, store at -20°C.