

TargetEx Fine Taq Polymerase 1 mg/mL

Catalogue Number: TGX-033-BS/-BM/-BL

INTRODUCTION

TargetEx Fine Taq Polymerase is a thermostable enzyme derived from the bacterium *Thermus aquaticus*, which inhabits geothermal hot springs. It is primarily used in polymerase chain reaction (PCR) techniques to amplify specific DNA sequences, allowing the production of millions of copies from a small DNA sample.

TargetEx Fine Taq Polymerase is reliable for routine PCR and is well-suited for incorporation into various master mixes, including qPCR and RT qPCR formulations. It is also available in lyo-ready and high-concentration form for flexible workflow integration.

Store the product at -20 °C.

PREPARATION

Prepare a 50-fold dilution of the 1 mg/mL polymerase stock using the following buffer solution: 20 mM Tris-, 100 mM KCl, 1 mM DTT, 0.1 mM EDTA, 0.5 % Tween 20, pH 8. The final concentration will be ~ 5 U/μL. Use 0.5 μL from this enzyme dilution for 25 μL reaction volume.

TYPICAL REACTION ASSEMBLY

To test the enzyme in a standard PCR reaction, prepare a master mix according to the component list below. Mix the solution thoroughly, and after removing all visible bubbles by centrifuging the plate or tubes. Create a heat profile on your PCR device according to the thermal cycler program setup table below. We recommend using technical parallels.

COMPONENT LIST

Materials	Volume to 25 μL (single measurement)	Recommended final concentration
Nuclease-Free Water (NFW)	17 μL	N/A
10X Reaction Buffer	2.5 μL	1X
Forward primer (10 μM)	1 μL	400 nM
Reverse primer (10 μM)	1 μL	400 nM
dNTP Mix (10 mM each)	0.5 μL	200 nM each
DNA Template (100 ng)	2.5 μL	10 ng/reaction
50X diluted TargetEx Fine Taq Polymerase 1 mg/mL	0.5 μL	~2.5 U/reaction

THERMAL CYCLER PROGRAM SETUP

No.	Step	Temperature (°C)	Duration	
1	Initial Denaturation	95	3 min	
2	Denaturation	95	30 sec	} min. 25 cycles
3	Annellation	50-65	30 sec	
4	Extension	72	2 min/1 kbp	

If you need further information or would like to try our products, please do not hesitate to contact us at info@targetex.com.

