

RepliPHI™ Phi29 DNA Polymerase (1 µg/µl)
RepliPHI™ Phi29 DNA Polymerase (0.1 µg/µl)
RepliPHI™ Phi29 Reagent Set (1 µg/µl)
RepliPHI™ Phi29 Reagent Set (0.1 µg/µl)

Cat. No. PPO31010, PPO40110, RH031110, RH040210, and RPB04041

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1. Introduction

RepliPHI™ Phi29 DNA Polymerase (Φ29 DNA Polymerase), derived from the *B. subtilis* phage phi29, is a highly processive enzyme with exceptional strand displacement activity. The enzyme also contains a 3→5′ exonuclease activity that enables proofreading capability.

RepliPHI Phi29 DNA Polymerase and the RepliPHI Reagent Sets are available in a 10-μg (10,000-Unit) size at two different concentrations of enzyme: 1 μg/μl (1,000 Units/μl) and 0.1 μg/μl (100 Units/μl).

2. Kit Contents and Specifications

Storage: Store only at –20°C in a freezer without a defrost cycle.

Storage Buffer: The RepliPHI Phi29 DNA Polymerase is supplied in a 50% glycerol solution containing 50 mM Tris-HCl (pH 7.5), 100 mM NaCl, 1 mM dithiothreitol (DTT), 0.1 mM EDTA, 0.5% NP-40 and 0.5% Tween 20®.

Unit Definition: One unit of RepliPHI Phi29 DNA Polymerase converts 25 pmol of deoxyribonucleotides into acid insoluble material in 30 minutes at 30°C.

Reaction Buffer: A Reaction Buffer is not supplied with RepliPHI Phi29 DNA Polymerase, however, a suggested Reaction Buffer is 40 mM Tris-HCl (pH 7.5), 50 mM KCl, 10 mM MgCl₂, 5 mM (NH₄)₂SO₄ and 4 mM DTT.

The RepliPHI Phi29 10X Reaction Buffer supplied with the RepliPHI Phi29 Reagent Set is 400 mM Tris-HCl (pH 7.5), 500 mM KCl, 100 mM MgCl₂, 50 mM (NH₄)₂SO₄ and 40 mM DTT.

Product	Cat. #	Conc.	Quantity
RepliPHI™ Phi29 DNA Polymerase, 10,000 Units	PP031010	1 μg/μl (1,000 U/μl)	10 μl
RepliPHI™ Phi29 DNA Polymerase, 10,000 Units	P040110	0.1 μg/μl (100 U/μl)	100 μl
RepliPHI™ Phi29 Reagent Set	RH031110		
RepliPHI™ Phi29 DNA Polymerase, 10,000 Units		1 μg/μl (1,000 U/μl)	10 μl
RepliPHI™ Phi29 10X Reaction Buffer			500 μl
dNTP Solution (dATP, dCTP, dGTP and dTTP)		25 mM each	80 μl
Dithiothreitol		100 mM	100 μl
Sterile Water			500 μl
RepliPHI™ Phi29 Reagent Set	RH040210		
RepliPHI™ Phi29 DNA Polymerase, 10,000 Units		0.1 μg/μl (100 U/μl)	100 μl
RepliPHI™ Phi29 10X Reaction Buffer			500 μl
dNTP Solution (dATP, dCTP, dGTP and dTTP)		25 mM each	160 μl
Dithiothreitol		100 mM	100 μl
Sterile Water			1 ml
RepliPHI™ Phi29 DNA Polymerase Dilution Buffer	RPB04041		1 ml

Specific Activity: RepliPHI Phi29 DNA Polymerase is provided at a specific activity of 1×10^6 Units/mg.

Contaminating Activity Assays: RepliPHI Phi29 DNA Polymerase is free of detectable endonuclease and RNase activities, and detectable DNA contamination.

3. Related Products

Cat. #	Concentration	Quantity
Premixed dNTP Solutions (All 4*)		
D08104	2.5 mM	10 μ mol (4 ml)
D59104	25 mM	10 μ mol (400 μ l)
*Includes dATP, dCTP, dGTP and dTTP. Concentrations and sizes are for each dNTP.		
dATP Solution		
D5910A	100 mM	10 μ mol (100 μ l)
dCTP Solution		
D5910C	100 mM	10 μ mol (100 μ l)
dGTP Solution		
D5910G	100 mM	10 μ mol (100 μ l)
dTTP Solution		
D5910T	100 mM	10 μ mol (100 μ l)

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