



phi29 DNA Polymerase

Product Information

MW	68 kDa (Reducing)
Cat#	POL-005
Label	His Tag
Notes	<p>The active reducing agent in the reaction buffer is critical for this enzyme. Although the reaction buffer supplied with the enzyme contains DTT, in order to ensure maximum activity, 4 mM DTT should be added when using buffers that have been stored for long periods of time or buffers that have been repeatedly freeze-thawed.</p> <p>Reaction temperatures above 65°C are not recommended.</p> <p>The enzyme does not have 5'→3' nucleic acid exonuclease activity.</p>
Purity	> 95% by SDS-PAGE and HPLC
Source	Bacillus subtilis phage phi29 (Φ29)
Storage	Store at -25 ~ -15°C for 2 years.
Activity	10 U/μL
Synonyms	phi29 DNA Polymerase, DNA polymerase
Component	10 U/μL phi29 DNA Polymerase, 100 mM KCl, 10 mM Tris-HCl, 0.1 mM EDTA, 1 mM DTT, 0.5% Tween 20, 50% Glycerol, 0.5% NP40, pH 7.4 at 25°C
Description	phi29 DNA polymerase is a DNA polymerase cloned from Bacillus subtilis phage phi29 (Φ29).
Applications	This enzyme has excellent strand replacement and sustained synthesis capabilities, enabling the unstranding and replication of complex DNA structures and isothermal DNA polymerization reactions in vitro that do not depend on thermal cycling. This enzyme possesses 3'→5' nucleic acid exonuclease proofreading activity.
Specification	250 U; 1250 U
Dilution Buffer	100 mM KCl, 10 mM Tris-HCl, 0.1 mM EDTA, 1 mM DTT, 0.5% Tween 20, 50% Glycerol, 0.5% NP40, pH 7.4 at 25°C



Creative Enzymes

Diagnostic Enzymes

phi29 DNA Polymerase

Expression System	E.coli
10× Reaction Buffer	50 mM Tris-HCl, 10 mM MgCl ₂ , 10 mM (NH ₄) ₂ SO ₄ , 4 mM DTT, (pH 7.5 at 25°C).
Activity Definitions	One unit refers to the amount of enzyme required to catalyze the incorporation of 0.5 pmol of dNTP into an acid-insoluble material in 10 minutes at 30°C.