



For research use only

ISO9001

## Phi29 DNA Polymerase

Product	Quantity	Cat. No.	Remarks
Phi29 DNA Polymerase	500 unit	EBT-3004	10 unit/ $\mu$ l

### Description

Phi29 DNA Polymerase is one of the enzymes showing strong strand displacement DNA synthetic activity. The polymerase has an inherent 3'→5' proof-reading exonuclease activity. The polymerase gene from the *Bacillus subtilis* phage phi29 ( $\Phi$ 29) was overexpressed and purified from *E.coli* strain.

- Extreme strand displacement : best fit for RCA (rolling circle amplification) and WGA by MDA (whole genome amplification by multiple displacement amplification)
- High fidelity : 3'→5' proof-reading exonuclease activity
- Extreme processivity : up to 70 kbp

### Concentration & Storage Condition

10 unit/ $\mu$ l. Store at -20°C.

### Storage Buffer

10 mM Tris-HCl, pH 7.5, 100 mM KCl, 0.1 mM EDTA, 1 mM DTT, 0.1% Triton X-100, 50% glycerol.

### 10x Reaction Buffer

500 mM Tris-HCl, pH 7.5, 100 mM  $(\text{NH}_4)_2\text{SO}_4$ , 100 mM  $\text{MgCl}_2$ , 40 mM DTT.

### Unit Definition

One unit is defined as the amount of enzyme required to incorporate 0.5 pmol of dNTP into acid insoluble material in 10 minutes at 30°C

### QC Tests

Activity, exo and endonuclease activity test, DNA contamination test, SDS-PAGE purity, performance tests.



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