

PRECISION ENZYMES TO FUEL CUTTING-EDGE APPLICATIONS

phi29 DNA Polymerase exhibits strong strand displacement activity and high processivity to enable efficient isothermal DNA amplification from low DNA template amounts. Additionally, its 3' → 5' exonuclease activity delivers high fidelity amplification, making it an appropriate solution for sequencing DNA template preparation.

HIGHLIGHTS

- Highly stringent enzyme manufacturing ensures quality performance across scales and lots
- Strong strand displacement activity facilitates isothermal amplification
- Strong processivity delivers products up to 70 kb in length
- High-fidelity amplification supports DNA template preparation for sequencing
- Available at 10 and 100 U/μL

SPECIFICATIONS

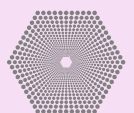
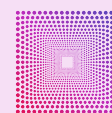
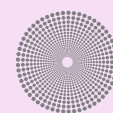
| Assay | Units tested | Specification |
|--|--------------|----------------|
| Purity (SDS-PAGE) | n/a | >99% |
| Exonuclease | n/a | Functional |
| DNA contamination (<i>E. coli</i> , mammalian, library) | 1000 U | <10 copies |
| Phosphatase | 1000 U | <1% released |
| Endonuclease | 1000 U | Not detectable |

ADVANTAGES OF PARTNERING WITH WATCHMAKER

- Custom enzyme concentrations to best fit your application
- Expedited custom labeling and kitting formats, from bulk to finished goods
- Application-relevant, kit-based lot testing
- ISO13485-compliant Quality Management System
- Flexible terms designed with both start-up and large organizational needs in mind

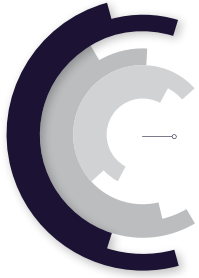
APPLICATIONS

- Multiple displacement amplification (MDA)
- Rolling circle amplification (RCA)
- Whole genome amplification (WGA)
- Cell-free cloning
- Preparation of DNA template for sequencing



OUR TECHNOLOGY: THE NEW FRONTIER OF PROTEIN ENGINEERING

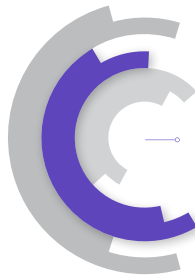
Our extensive experience with the distinct challenges in inherited disease, somatic oncology, transcriptomics, and epigenomics allows us to purpose-design enzymes and workflows to support emerging applications in precision medicine, genomics, and synthetic biology. We have established an innovative, computationally driven, and vertically integrated protein engineering and production platform to create best-in-class, tailor-made solutions:



ADVANCED PROTEIN ENGINEERING

Our platform combines directed evolution with in silico rational design and leverages deep sequencing and machine learning to interrogate vastly more sequence space—increasing the probability of identifying variants with improved performance.

High-resolution, NGS-based readouts enable the unraveling of underlying molecular mechanisms and harness multidimensional Design of Experiments (DOE) data to predict enzyme behavior across a defined chemistry spectrum.



COMPUTATIONAL BIOLOGY

Deep domain knowledge facilitates agile scale-up from prototype to large volume production of purpose-built enzymes, while maintaining high purity and consistent quality across lots.



HIGH-STRINGENCY ENZYME PRODUCTION

| PRODUCT | 0.25 KU | 1 KU |
|---|-------------|--------------|
| phi29 DNA Polymerase Kit (10 U/μL) ¹ <i>Incl. 10X phi29 Pol Reaction buffer</i> | 7K0104-25UL | 7K0104-100UL |

| PRODUCT | 5 KU | 100 KU | 500 KU |
|--|-------------|---------------|---------------|
| phi29 DNA Polymerase Kit (100 U/μL) ¹ | 3K0106-50UL | 3K0106-1000UL | 3K0106-5000UL |

¹A unit is defined as the amount of enzyme required to convert 50 pmol of dNTPs into a polynucleotide fraction in 10 minutes at 30°C.

FOR ADDITIONAL CONCENTRATIONS AND CUSTOM PACK SIZES, CONTACT

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