GENEWIZ Multiomics & Synthesis Solutions

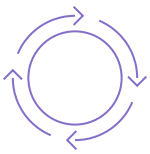
Quantitative and Digital PCR Solutions

Detect your target sequences with unmatched accuracy of PCR

From copy number variation (CNV), viral vector copy number, and viral titer to customized assays, GENEWIZ® Multiomics & Synthesis Solutions offer polymerase chain reaction (PCR) solutions to align with your research goals and applications. Our assay experts will partner with you to find the best approach so you can be confident you'll receive accurate detection of your nucleic acid targets. Whether through real-time detection with quantitative PCR (qPCR) or endpoint detection with digital PCR (dPCR), our PCR solutions offer the flexibility, speed, and precision you need to advance your scientific breakthroughs.

	Quantitative PCR (qPCR)	Digital PCR (dPCR)
Details	• Tried-and-true method for real-time detection • Wide dynamic range of detection • High throughput for speed and scalability • Convenient and affordable predeveloped assays or custom solutions	• Absolute quantitation without the need for complex standard curves or reference targets • End-point detection boosts reproducibility • Detect rare transcripts and low frequency targets • Straightforward data analysis and interpretation
Applications	• Gene expression • Copy number variation (with standard curve) • Confirmatory testing of NGS data • SNP genotyping and allelic discrimination • Methylation analysis (CpG) • Pathogen detection and quality control • Customized qPCR solutions	• Absolute copy number variation (CNV) • Rare mutation and allelic discrimination • Low-abundance transcript detection • Viral titer (copies/mL) • Vector copy number (copies/genome) • Circulating tumor DNA (ctDNA) and cell-free DNA (cfDNA) detection in liquid biopsy

PCR Solutions Workflow



1

Assay/Primer Design

Primers and probes are designed and verified to target your regions of interest

2

Sample Preparation

DNA/RNA extraction, sample QC, and cDNA generation are performed to prepare samples for processing

3

PCR Processing

Prepared samples are processed on QuantStudio or QIAcuity systems

4

Data Analysis & Reporting

Results are collected and analyzed to generate reports that can be customized to meet your project goals

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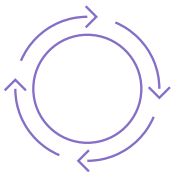
Features and Benefits

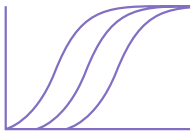
Experimental Design and Optimization

To ensure project success



Assay Development and Validation

Customized to meet your project needs



Standard and Customized Data Analysis

Options available

- **High-throughput capacity** using a single vendor for scalable PCR assays and other NGS approaches to supplement and extend your results
- **Ph.D.–level project managers** to provide expertise in primer design, optimization, and troubleshooting
- **Streamline operations** by integrating PCR with other GENEWIZ services and more from Azenta Life Sciences
- **Complete cell and gene therapy solutions** including CAP/CLIA-certified solutions to deliver high-quality cell and gene therapies

dPCR for Drug Development

Regulatory guidelines recommend the use of PCR methodology for multiple quality and safety checkpoints throughout the drug development process. For cell and gene therapy products, hyper-sensitive dPCR has largely been used for the evaluation of viral titer as well as quantification of viral vector copy number (VCN) of treated cells for AAV, lentivirus, and retrovirus.

Contact us to learn how our customized PCR solutions can help you advance your clinical research.

Scan or click the QR code to explore our full portfolio

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