QIAGEN

Overview

Procedure

Minimal Cell Requirement

HMW DNA

Long-Range PCR

Sequencing-Ready DNA

Sequencing-Ready RNA

Competitive Performance

Ordering Information

AllPrep® DNA/mRNA Nano Kit

Simultaneous DNA and mRNA purification from low-biomass samples

Overview
Procedure
Minimal Cell Requirement
HMW DNA
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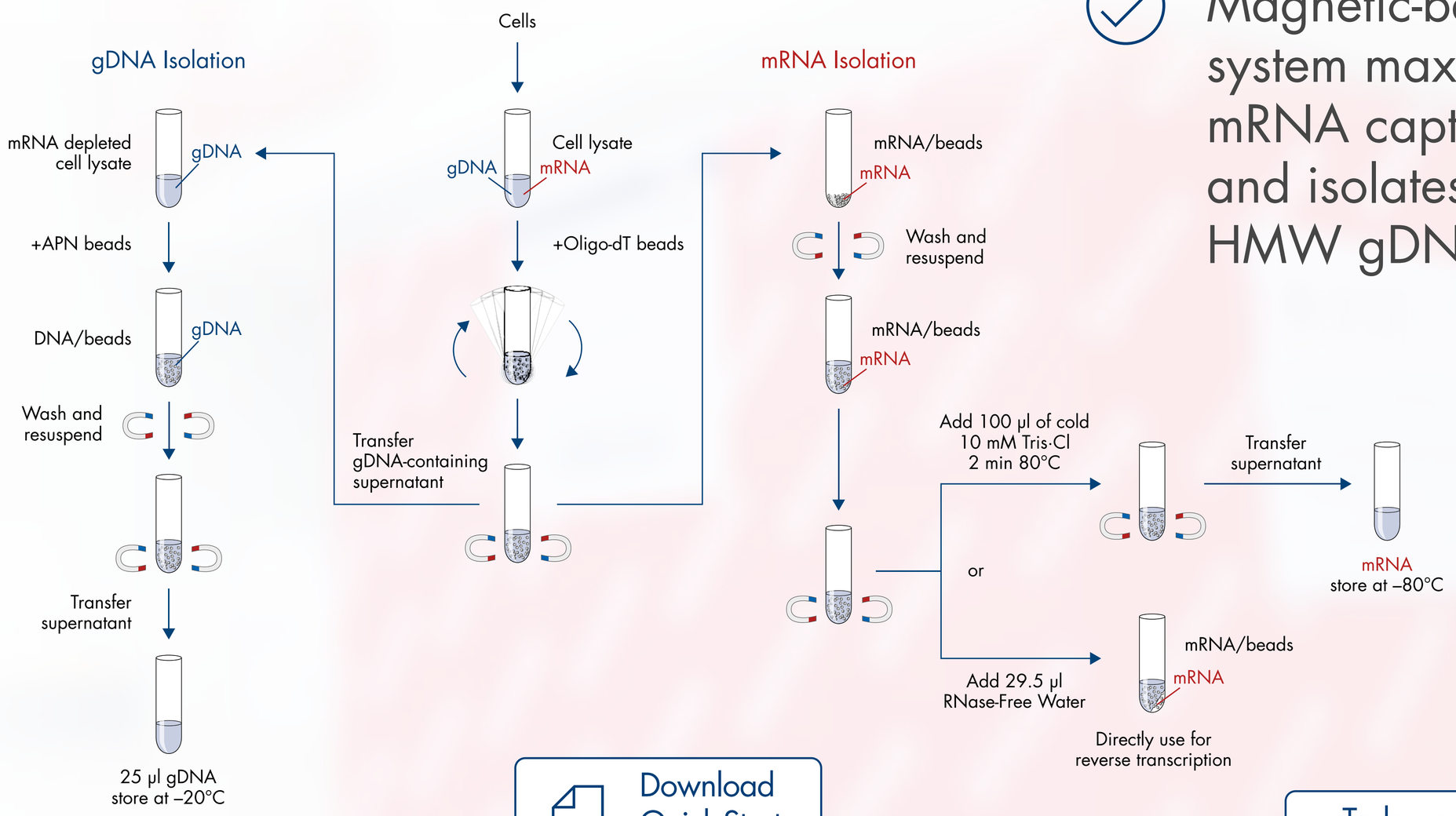
Competitive Performance
Ordering Information

Genomic and transcriptomic profiling from the same sample



HMW: high molecular weight.

Magnetic-bead system maximizes mRNA capture and isolates HMW gDNA

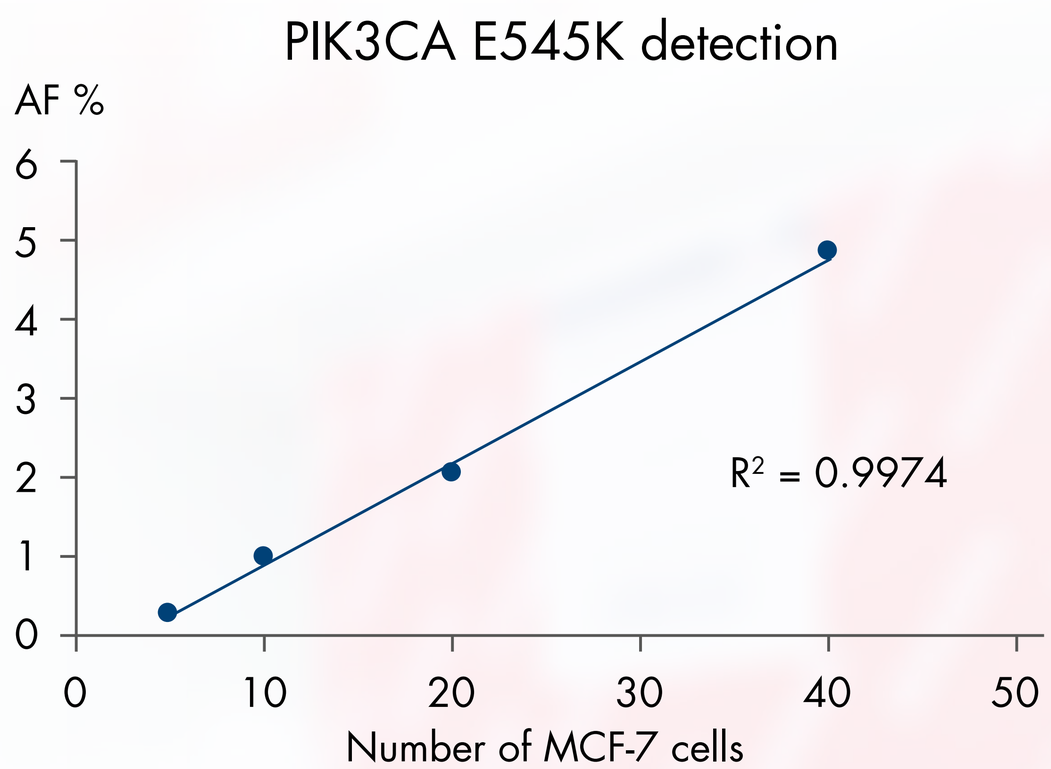
Download Quick-Start Protocol

To learn more, go to our webpage

Overview
Procedure
Minimal Cell Requirement
HMW DNA
Long-Range PCR
Sequencing-Ready DNA
Sequencing-Ready RNA
Competitive Performance
Ordering Information

Requires minimal amounts of cells

Down to 5 cells



AF: allele frequency.

Pyrosequencing® for PIK3CA hotspot mutation E545K was done on gDNA isolated using the AllPrep DNA/mRNA Nano Kit.

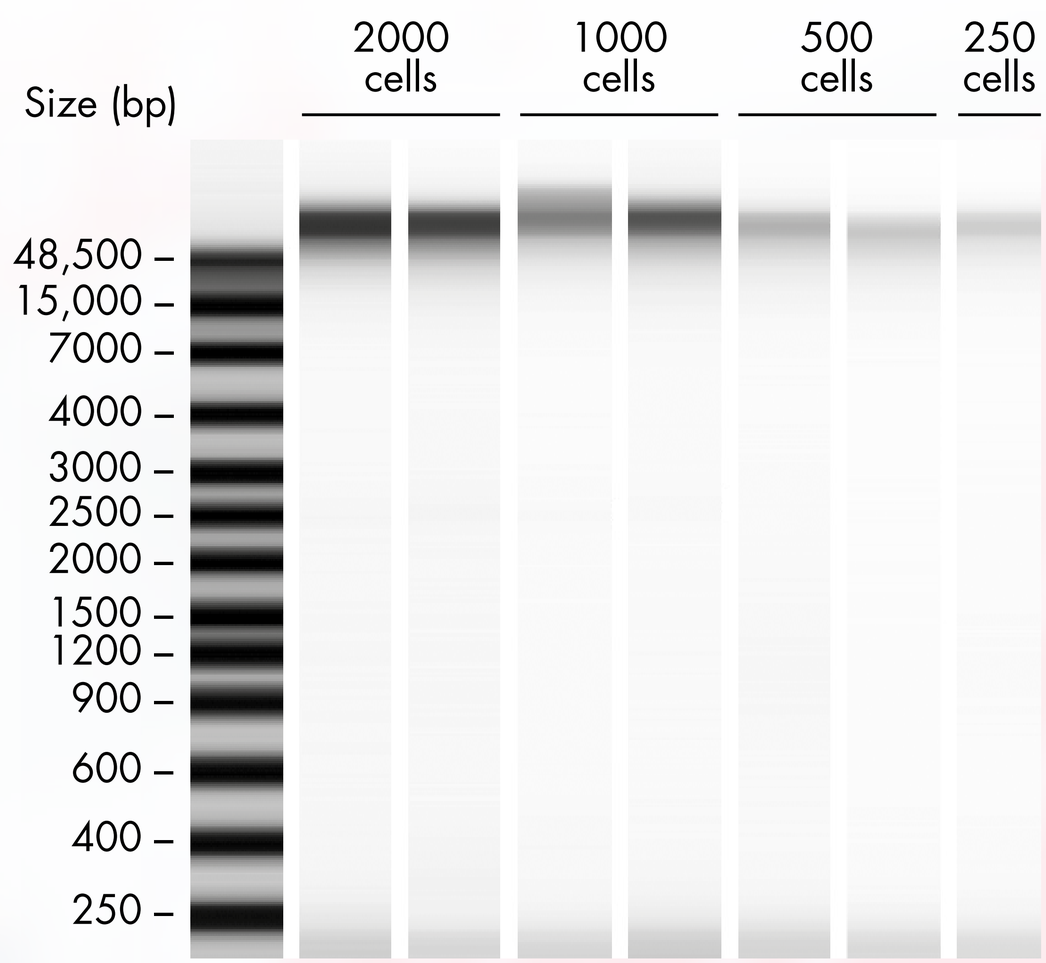
Mutation detection is feasible down to **five MCF-7 cells** spiked in 5 ml of blood.

Download Handbook

Overview
Procedure
Minimal Cell Requirement
HMW DNA
Long-Range PCR
Sequencing-Ready DNA
Sequencing-Ready RNA
Competitive Performance
Ordering Information

Extracts high-molecular-weight gDNA

≥60.000 bp

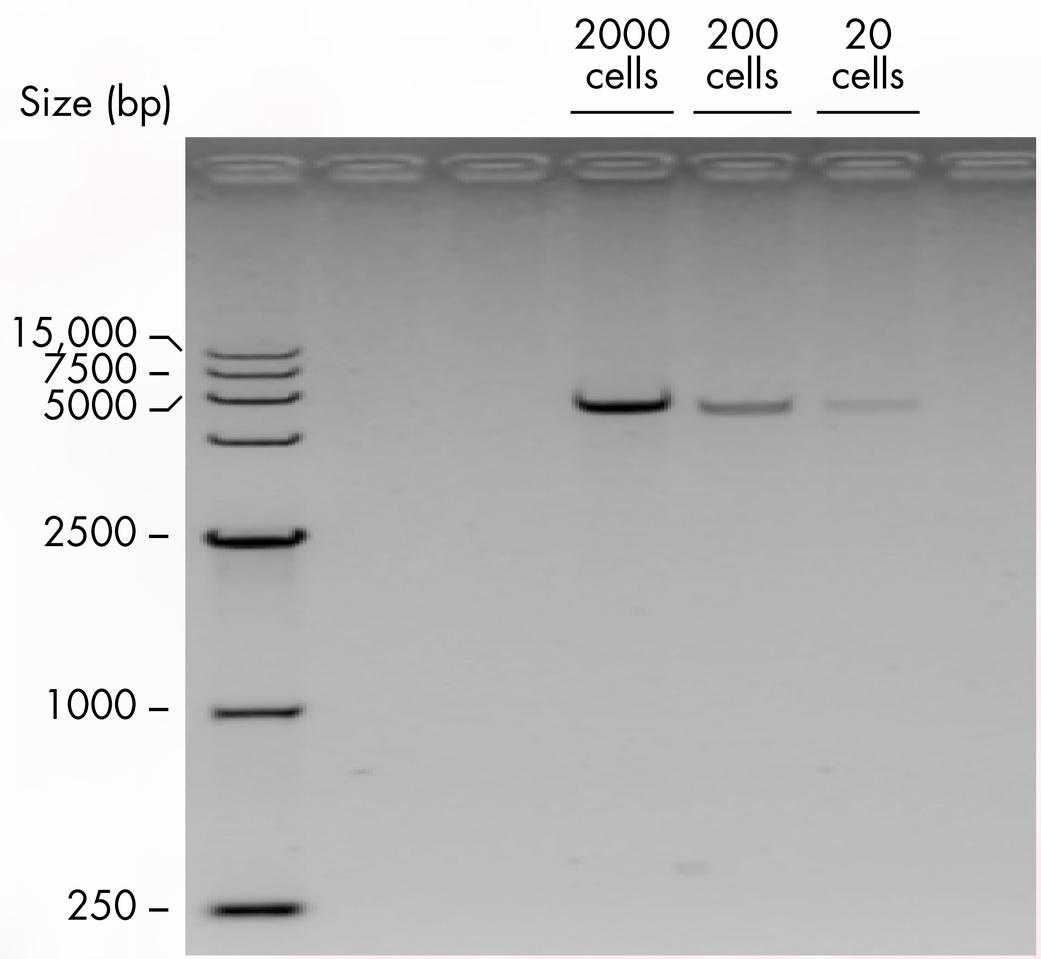


Genomic DNA was isolated from various numbers of MCF-7 cells and analyzed with an automated electrophoresis instrument.

Genomic DNA isolated with the AllPrep DNA/mRNA Nano Kit has high molecular weights of **60,000 bp or more**.

Overview
Procedure
Minimal Cell Requirement
HMW DNA
Long-Range PCR
Sequencing-Ready DNA
Sequencing-Ready RNA
Competitive Performance
Ordering Information

Highly suitable for long-range PCR



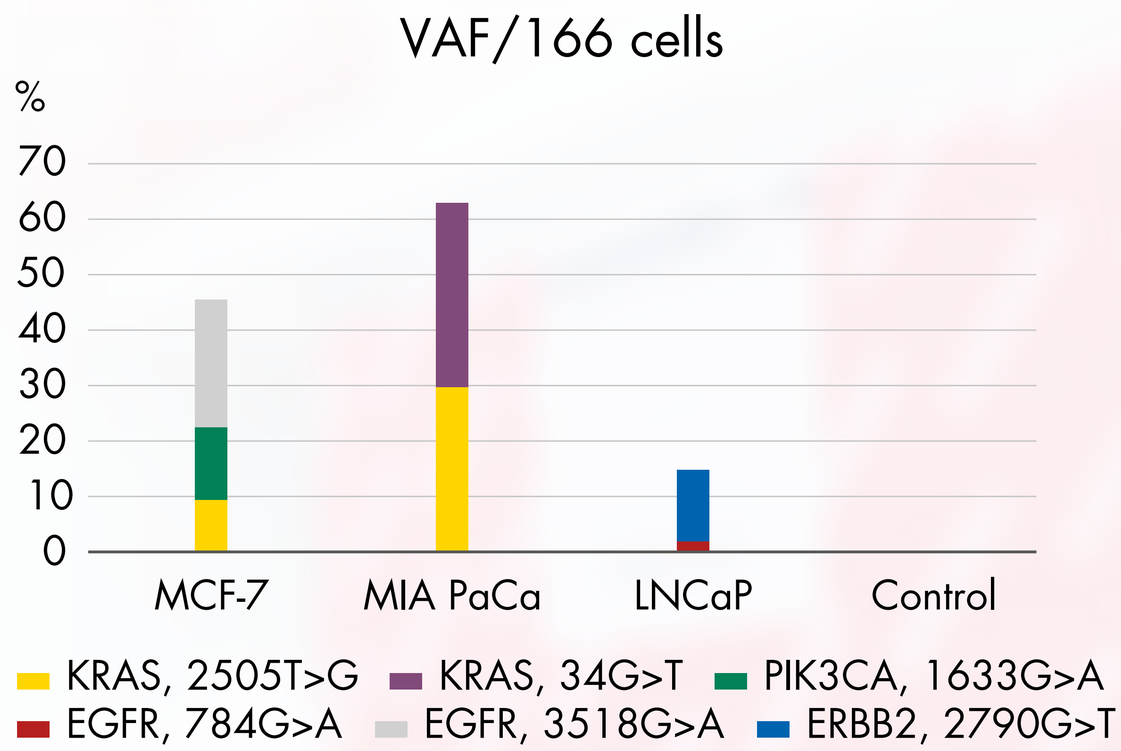
Genomic DNA was purified from ≤2000 cells and amplified using the UltraRun LongRange PCR Kit.

A 4 kb amplicon from P53 was amplified from as few as 20 cells.

The resulting PCR fragments are highly suitable for a variety of applications, such as cloning, genome mapping and sequencing.

Overview
Procedure
Minimal Cell Requirement
HMW DNA
Long-Range PCR
Sequencing-Ready DNA
Sequencing-Ready RNA
Competitive Performance
Ordering Information

Allows the detection of cell-line variants from low-biomass samples



VAF: variant allele frequency.

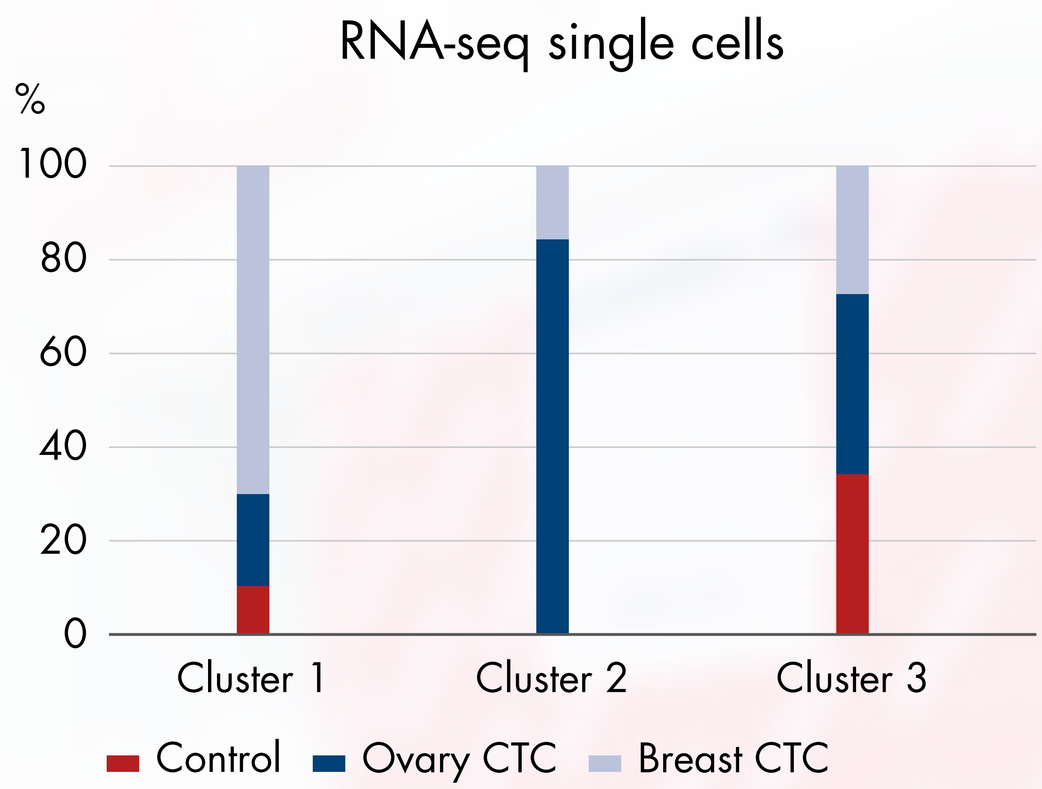
mRNA and gDNA were isolated from different cell lines that were mixed and spiked into healthy background.

Isolated DNA was used for library preparation, and NGS was performed.

All variants described for the selected cell lines were **detected with the expected allele frequency**.
None of them were found in the healthy donor control.

Overview
Procedure
Minimal Cell Requirement
HMW DNA
Long-Range PCR
Sequencing-Ready DNA
Sequencing-Ready RNA
Competitive Performance
Ordering Information

Isolates mRNA suitable for single-cell RNA sequencing



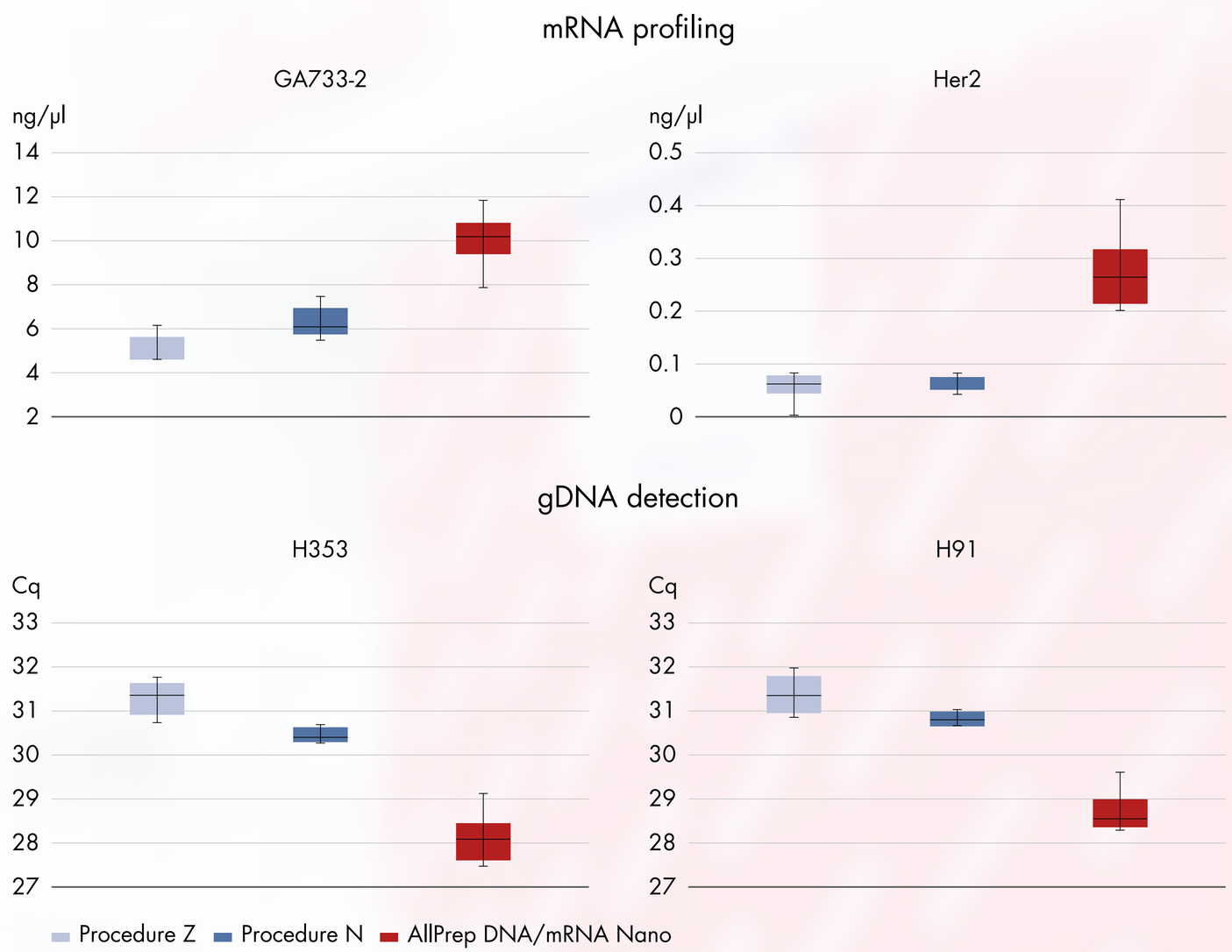
mRNA from single cells was purified using the AllPrep mRNA/DNA Nano procedure.

RNA sequencing was done with the QIAseq® UPX 3' Transcriptome Kit.

The UPX gene-expression profiles differentiate single cells from Breast CTC, Ovary CTC, and healthy donor controls.

Overview
Procedure
Minimal Cell Requirement
HMW DNA
Long-Range PCR
Sequencing-Ready DNA
Sequencing-Ready RNA
Competitive Performance
Ordering Information

gDNA and mRNA yield significantly exceeded all other competitor procedures



mRNA was analyzed using the AdnaTest BreastCancerDetect Kit and yields were determined by densitometry.

Matched gDNA yield was determined by qPCR.

Overview
Procedure
Minimal Cell Requirement
HMW DNA
Long-Range PCR
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Sequencing-Ready RNA
Competitive Performance
Ordering Information

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Product	Contents	Cat. no.
AllPrep DNA/mRNA Nano Kit (12)	For 12 preps: Oligo-dT magnetic beads, DNA-isolation beads, collection tubes, RNase-free water and buffers	80272
AdnaMag-S	Magnetic rack for 8 tubes, 1.5 ml	399911

For up-to-date licensing information and product-specific disclaimers, see the respective QIAGEN kit handbook or user manual. QIAGEN kit handbooks and user manuals are available at www.qiagen.com or can be requested from QIAGEN Technical Services or your local distributor.

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