

How low can you go?

DEPArray™ FFPE QC Kit, DNA quality control assay for FFPE samples.

Formalin-fixation causes fragmentation and chemical modifications in DNA, posing significant challenges for molecular assays, such as downstream Next Generation Sequencing (NGS) applications. The DEPArray™ FFPE QC Kit has been specifically developed to assess the DNA integrity of cell suspensions obtained from formalin-fixed paraffin-embedded (FFPE) samples of human origin prior to DEPArray™ experiments and Next-Generation Sequencing (NGS) library preparation.

DNA quality assessment is performed by a qPCR-based assay using two different primer pairs that produce amplicons of 54 bp and 132 bp. A standard curve for each primer pair is generated. The quality of DNA is inferred by the ratio between the quantification using the long amplicon and the short amplicon (QC score). The QC score, coupled with ploidy information allows to predict the outcome of NGS library preparation, providing a useful tool to infer the minimum recommended number of cells to obtain a given NGS performance level.

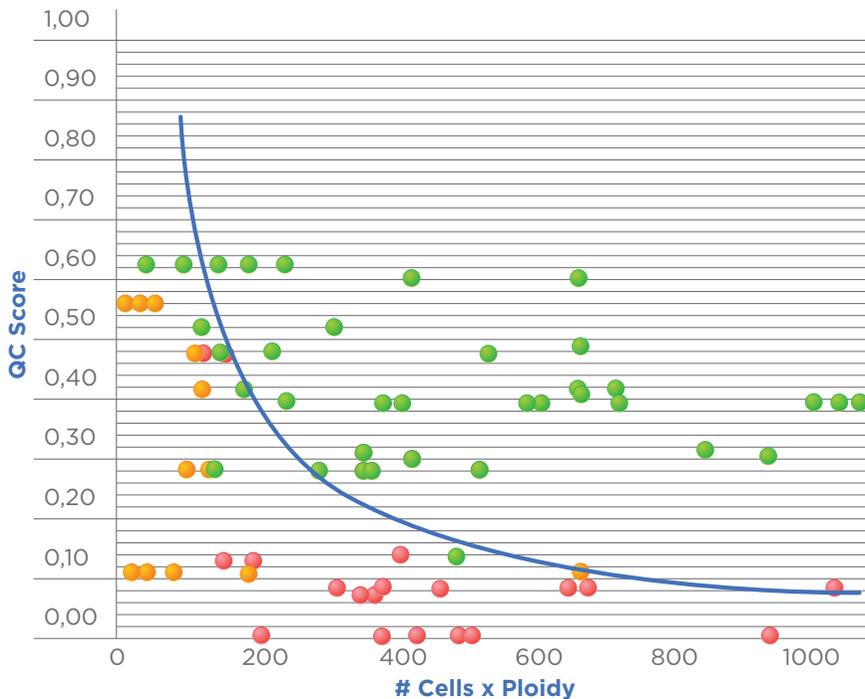


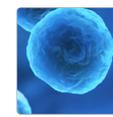
Fig. 1

The QC score, combined with ploidy and the amount of cells, allows to calculate the effectively amplifiable template in the sample ($EAT = QC \text{ score} \times \text{number of cells} \times \text{ploidy}$), which has a predictive value for the outcome of library preparation. With a cut-off of $EAT \geq 70$, the assay predicted the achievement of coverage uniformity >90% with an accuracy of 91%.

Fig. 1 Relationship among QC score, the outcome of library preparation and the number of cells x ploidy used as input for library preparation. n=77 Ion AmpliSeq™ CHPv2* library preparations with different DEPArray™-sorted, precise cell-number inputs (range 6-600) from 20 oncological FFPE samples.

- coverage uniformity >90
- coverage uniformity <90
- failed libraries
- EAT cut-off = 70





Lyse and Analyze

DEPArray™ LysePrep Kit has been specifically developed and optimized for the lysis of up to 1500 fresh/fixed cells in order to release genomic DNA.

The 3 µl of cells lysate obtained can be used directly for subsequent DNA analysis (PCR assay, NGS library preparation).

Samples:

- ✓ Fresh/live cells
- ✓ Paraformaldehyde (1%-2% PFA, 10'-20' at RT)
- ✓ Cells isolated from blood samples collected in CellSave™ Preservative Tubes/Cell Free DNA BCT®*
- ✓ Cells fixed with Inside Stain Kit (Inside Fix/Inside Perm) from Miltenyi Biotec GmbH*
- ✓ Cells suspension obtained from FFPE tissue specimens

DEPArray™ LysePrep Kit has been developed and validated for DEPArray™ FFPE Application.

To order your DEPArray™ LysePrep Kit today, please email: orders-quotes@siliconbiosystems.com

www.siliconbiosystems.com

*DEPArray is a trademark of Menarini Silicon Biosystems. CellSave™ Preservative tubes is a trademark of Janssen Diagnostics, LLC and Cell Free DNA BCT® tubes is a registered mark of Streck Innovations. Inside Stain Kit is a product of Miltenyi Biotec. Ion AmpliSeq™ is a trademark of Life Technologies.

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Features:

- Simple one-step cell lysis procedure
- No sample transfers, columns or washes which can lead to loss and/or dilution of the precious sample
- Entire lysate can be used in downstream reactions ensuring maximal sensitivity and accuracy in your experiments

