

ki.se

For information about
gDNA extraction at KI Biobank



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Precision Medicine Package KI Biobank



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Precision Medicine Package

KI Biobank has for several years offered automated extraction of cell-free circulating DNA from plasma (cfDNA) and tissue DNA (tDNA) from paraffin-embedded tissue (FFPE) as well as genomic DNA (gDNA) from blood and saliva.

Sample Preparation of cfPlasma: For the best results, plasma should be prepared as fresh as possible using a double centrifugation protocol. When handling fresh/newly collected blood samples, KI Biobank offers preparation of cfPlasma from STRECK or EDTA tubes, for sample requirements see Table below.

Extraction of cfDNA from cfPlasma: cfDNA from cfPlasma is extracted on Revvity ChemagicPrime8 using chemagic™ Prime cfDNA Blood 3–5K Kit.

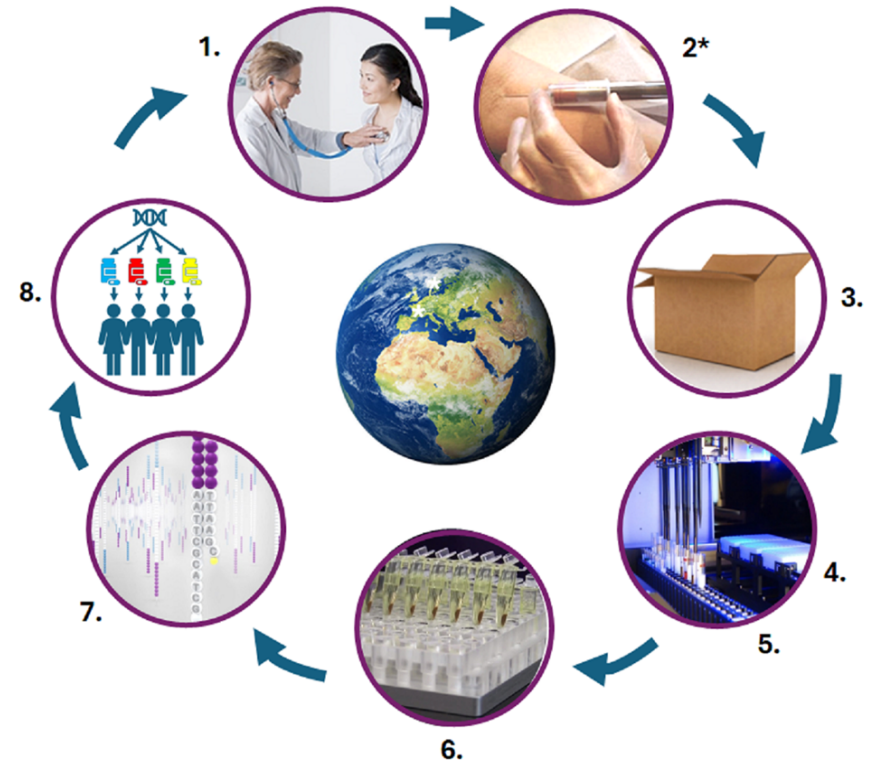
Extraction of tDNA from FFPE: tDNA from FFPE is extracted on Maxwell® RSC Instrument using Maxwell RSC Xcelerated DNA FFPE kit.

Sample type	Sample tube type etc.	Instrument	Input DNA extraction	Extraction method	Input DNA Lib prep & seq conc. [ng]*
Whole blood	Streck or EDTA	Revvity	2 x 3-5 mL cfPlasma	Magnetic beads	10-250 in 50 µl EB
Tissue	FFPE	Maxwell	2 x 3 sections of 5-10 µm	Magnetic beads	10-250 in 50 µl EB

*Contact analysis lab. In addition, gDNA is often recommended to be included in the analysis.

Reformatting: We offer reformatting to plates in accordance with the analysis platform requirements.

Concentration & Quality Control: Concentration is measured by Qubit. Tape station analysis is used on an agreed number of samples to evaluate DNA quality. In addition, KI Biobank recommend a pilot* in cooperation with the analysis platform.



Precision Medicine Studies Sample Logistics

1. Clinic
2. Consent & Sampling
3. Transport
4. Sample Reception & Preparation at KI Biobank
5. Rapid DNA-extraction at KI Biobank and Sample Delivery
6. Library Preparation & Sequencing
7. Data Analysis
8. Clinic – Tailored Treatment

External Quality Control: To ensure continued high-quality standard, KI Biobank sends samples for quality control on a yearly basis to Proficiency Testing Provider IBBL – Integrated Biobank of Luxembourg



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