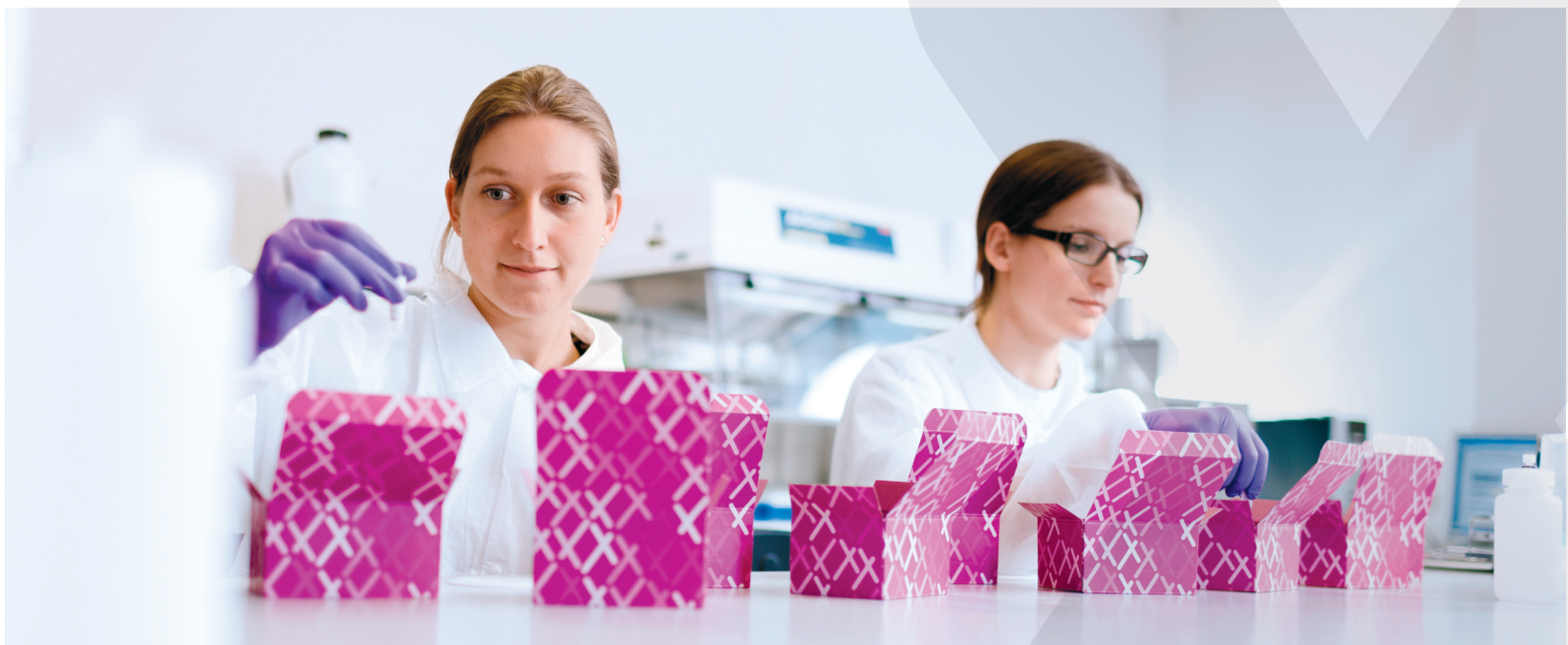


GENDX

CHIMERISM MONITORING



personalizing diagnostics

KMRtype[®] & KMRtrack[®] reagents

KMRengine[®] software

qPCR based

High sensitivity

Easy & comprehensive workflow

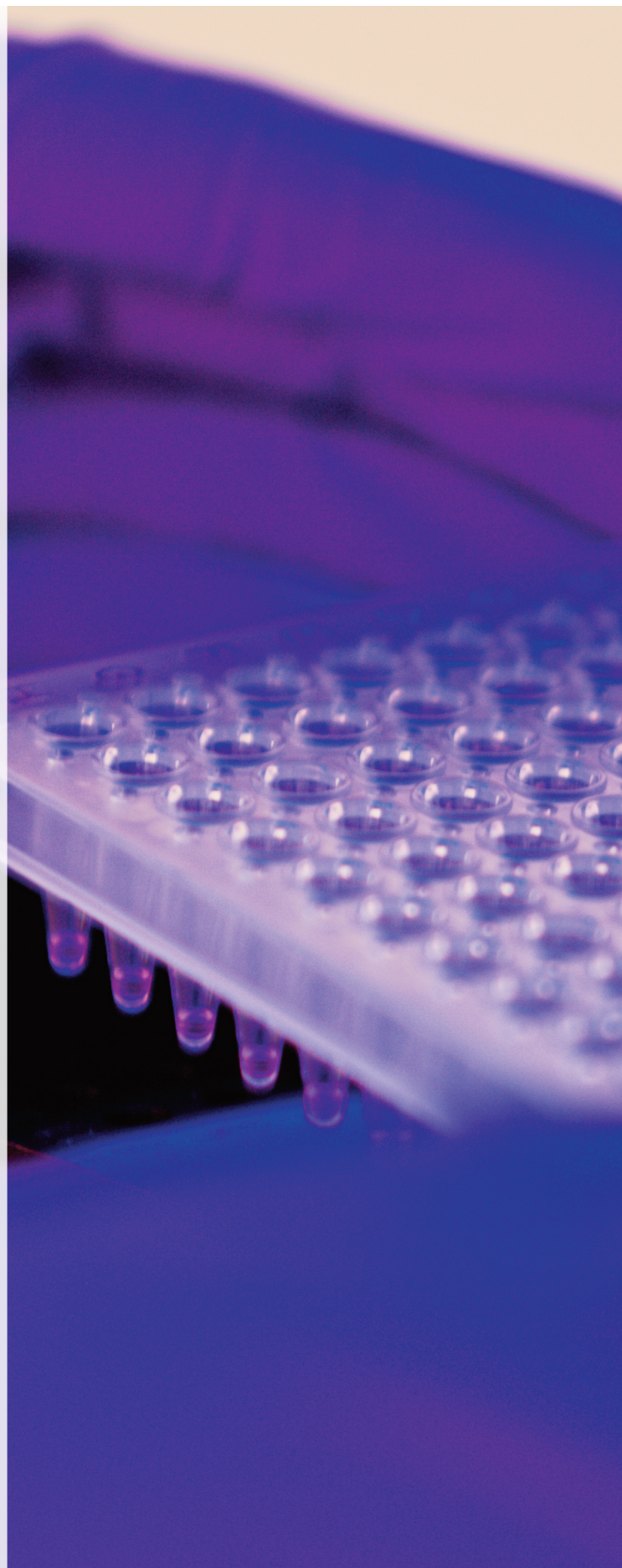
qPCR-Based Chimerism Monitoring

In an allotransplantation cells are transferred from a donor to a recipient. When successful, the engraftment is maintained, although the recipient may have its own cells present as well as cells from the donor.

This chimeric state of the transplant is dynamic and a relapse to a diseased state in which recipient cells increasingly return should be avoided. Monitoring the post-transplant chimeric status is important as it could indicate an imminent relapse.

Earlier relapse detection with qPCR

To detect a relapse or predict other possible undesirable changes in chimeric status, the measurement has to be highly sensitive. When using qPCR as a method of measurement, a sensitivity of as low as 0.05% can be realized. This is 20- to 100-fold more sensitive compared to current conventional method using STRs. Overcoming the shortcomings in sensitivity and to ease the analysis, we have created KMRtype & KMRtrack reagents together with KMRengine software. The first comprehensive and complete workflow for Chimerism Monitoring by qPCR.



KMRtype[®], KMRtrack[®] & KMRengine[®]

- Compatible with multiple brands and types of real-time thermal cyclers
- Up to 8 samples per genotyping experiment
- Multiple donor analysis
- Reduced lab workflow
- Flexible experiment setup
- Easy to use full pipetting protocol provided
- Automated protocol generation
- Automated data analysis
- Clear results within seconds
- Longitudinal data storage and reporting

Compatible qPCR systems

ViA[™] 7, v1.2.4

QuantStudio[™] 5, v1.2

QuantStudio[™] 6, v1.2/1.3

QuantStudio[™] 7, v1.2

QuantStudio[™] 12k, v1.2

QuantStudio[™] DX, v1.2

Applied Biosystems[®] 7500, v1.3.1/1.4/2.0.2/2.0.6/2.3

Applied Biosystems[®] 7500 Fast, v2.0.6

Applied Biosystems[®] 7900 HTFast
(Only compatible with AlleleSEQR)

BioRad CFX96[™], v1.6/3.0/3.1

LightCycler 480-I
(Only compatible with AlleleSEQR)

Check with our Technical Support Team for compatibility of other systems

The most sensitive and specific system available today

Multiple donor analysis

For recipients receiving serial transplants, monitoring is no longer challenging. With our highly sensitive system multiple donors can be traced simultaneously. With the increased use of double cord blood donations this feature improves the opportunities for highly sensitive and longitudinal monitoring.

Up to 8 samples per genotyping experiment

With a multiplexed assay the number of reactions and reagents needed per sample is minimized, enabling an experimental set-up of up to 8 samples per run (when applying a 96-well plate and the KMRtype Core kit). Samples from both recipient and donor can be analyzed in separate experiments, providing additional flexibility.

39 markers over 18 chromosomes

A balanced set of markers distributed over many chromosomes increases the chance of finding informative markers. Most of the markers used in our assay are located in InDels. The location of a marker might exclude it from analysis when the location is known to be compromised in a specific disease.

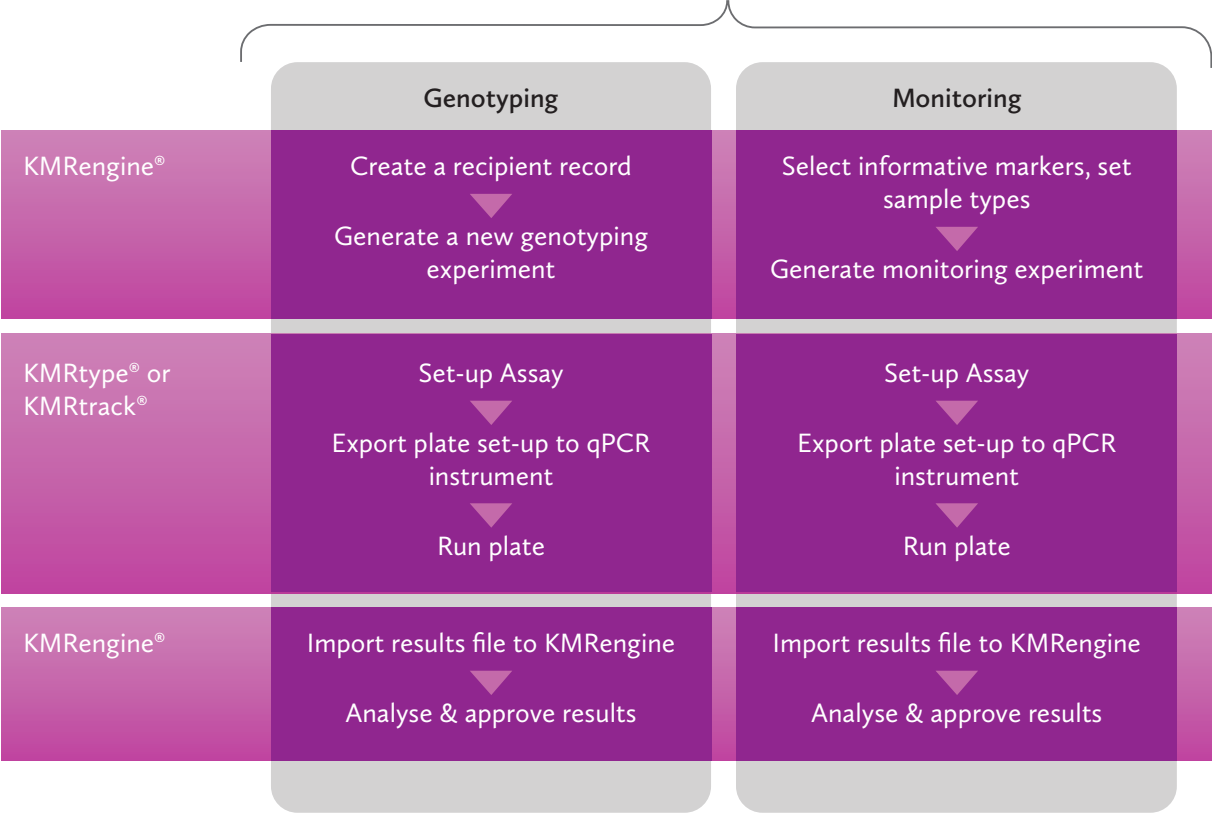
Full workflow support

Setting up a new experiment using KMRengine® software is straightforward. Only basic recipient and sample details are needed and all collected information is stored in every recipient record. The software directly shows the plate set-up and all protocols, and plate overviews are directly printable.

Automated data analysis

After completing an experiment on the qPCR instrument the results file can be imported into KMRengine®. The software will automatically display all results in a comprehensive overview to make approval easy and results can directly be added to the relevant records. Finally a full or summarized report is generated as PDF or as a printable hard copy.

Workflow



Automated data analysis & direct report printing

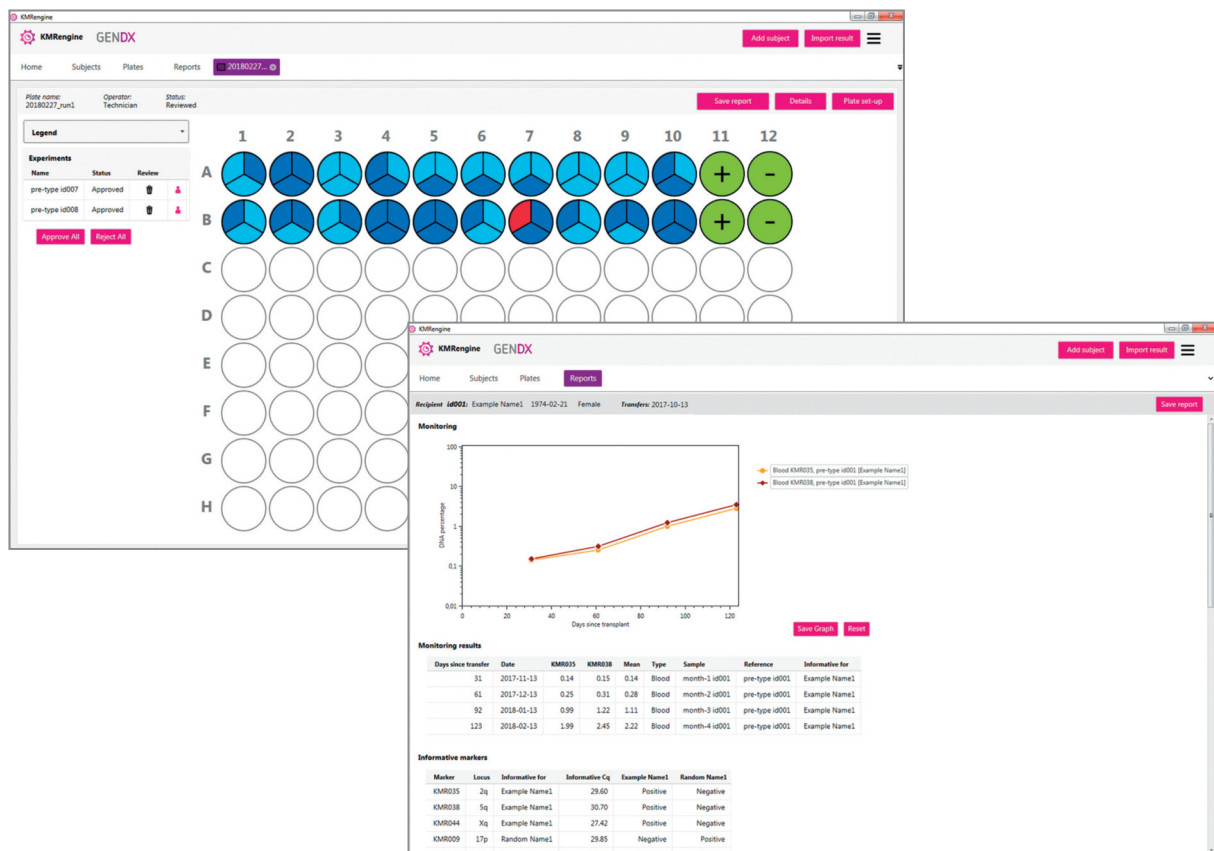
Increase sensitivity

KMRengine guides you through the entire Chimerism Monitoring workflow. From genotyping to the most recent time point at which the chimeric status of a transplant is monitored.

Adding recipient records is self-explanatory; adding a sample to an experiment only takes one mouse-click. After data importing, the results are displayed graphically on a micro-titer-plate. So in one quick overview you can approve results or inspect the raw Cq values and have the option to exclude a value.

When all informative markers are saved in the recipient record, a KMRtrack (monitoring) experiment can be set-up. Again by selecting the relevant recipient, markers and cell types and placing them on the plate with one mouse-click.

After setting up an experiment for either KMRtype (genotyping), KMRtrack (monitoring) or both as they can be combined, the set-up file can be exported to the qPCR instrument. The protocol with the plate lay-out, including all required DNA concentrations and pipetting schemes, can be printed from KMRengine for your convenience.



Continue with high-sensitivity monitoring

AlleleSEQR monitoring reagents are now provided by GenDx. This means that all recipients previously typed with AlleleSEQR can still be monitored in the same way as before. The advantage is that these recipients can be added to KMRengine®, giving you the benefit of automated data analysis and storage, easy reporting and protocol printing.

Available products Chimerism Monitoring (CE-IVD)

KMRtype	Mix 1-13 (39 assays) + KMRassay	24 samples	8841781
KMRtrack	Full set of 39 assays + KMRassay	48 rxn/assay	8842982
	Individual Assays	48 rxn/assay	8844342-XX
KMRassay	Reference Assay 901	288 rxn	8843284
	qPCR Buffer & Enzyme	288 rxn	8843283
KMRengine	Software		

Available products Chimerism Monitoring (For Research Use Only)

KMRtype	Core	Mix 1 – 10 (30 assays)	24 samples	8341181
	Extended	Mix 11 – 13 (9 assays)	24 samples	8341581
	Full	Mix 1 – 10 (30 assays) + KMRassay	24 samples	8341781
KMRtrack	Core	Primary set of 30 assays	48 rxn/assay	8342182
	Extended	Secondary set of 9 assays	48 rxn/assay	8342582
	Starter kit	Core set of 30 assays + KMRassay	48 rxn/assay	8342982
	Individual Assays	KMR004 – KMR057	48 rxn/assay	8344342-XX
KMRassay	Reference Assay 901		288 rxn	8343284
	qPCR Buffer & Enzyme		288 rxn	8343283
KMRengine	Software			

Available product AlleleSEQR (For Research Use Only)

All 34 individual markers	CA001 – CA034	48 rxn	8344342-XXCA
Reference Assay	CA999	218 rxn	8343294
AlleleSEQR qPCR Master Mix		320 rxn	8343293
KMRengine	Software		

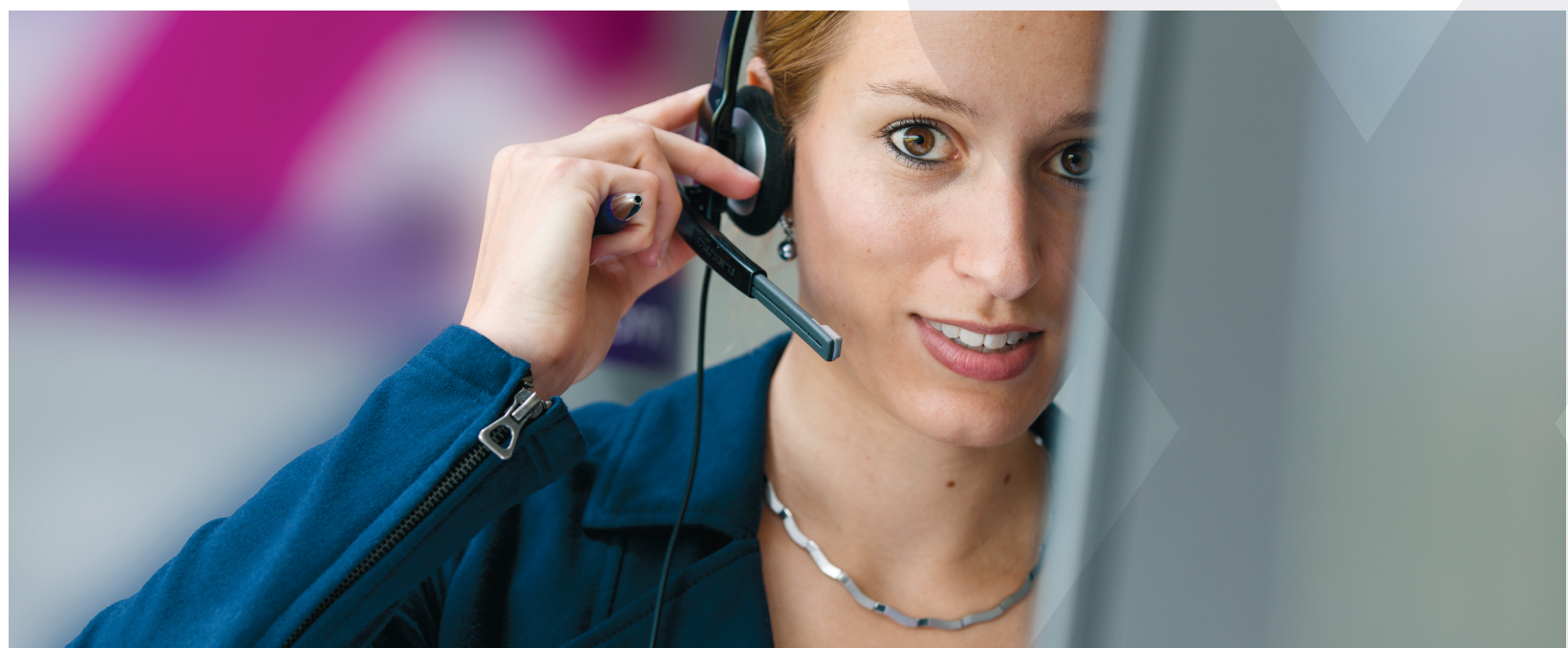
Contact our Technical Support team Get involved

Our Support team can assist you with practical matters and data interpretation. For all our Sanger, NGS and Chimerism monitoring solutions, reagents and software.

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M17-010, V4, 2018-04