NGSgo®-MX11-3 EASY AS ONE-TWO-THREE

experts in transplant diagnostics

Highest quality in multiplexing
Easy & flexible workflow
Exclude null alleles
From DNA to report in 1.5 days

NGSgo®-MX11-3

DESIGNED WITH HIGH QUALITY IN MIND

Multiplexing significantly speeds up the amplification process, however, mixing too many primers together in one tube does not always lead to the best result. GenDx investigated how to achieve the highest data quality with as few primer tubes as possible. The result: NGSgo-MX11-3. High quality, easy as one-two-three.

→ Easy three-tube setup
→ Fast workflow
→ Highest quality in multiplexing

WHOLE-GENE COVERAGE

NGSgo-MX11-3 has the largest gene coverage of any multiplex product currently on the market. The whole-gene coverage provides the highest resolution in multiplexing, resulting in clear-cut genotyping and resolution of all null alleles, except for only two rare ones.

→ Highest resolution
→ Minimal ambiguities
→ Resolution of Null alleles
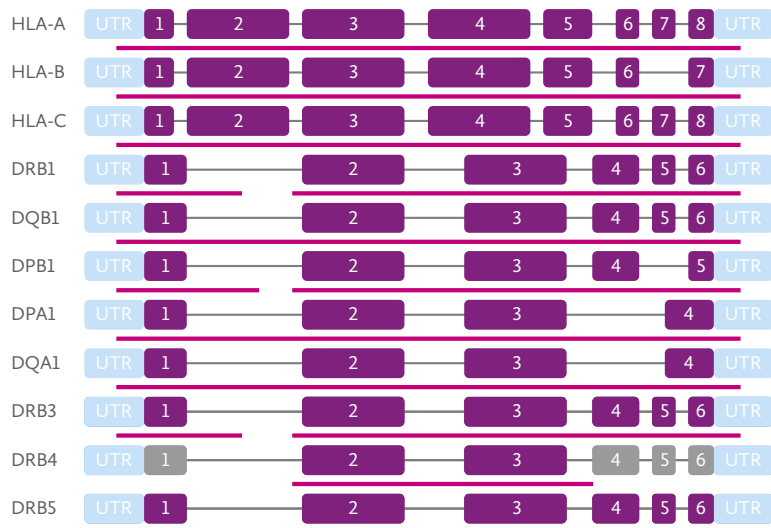
Amplified exon

coverage

AMPLIFICATION AS EASY AS ONE-TWO-THREE

With only three components in the mix, 11 HLA genes are amplified in three wells per sample. Immediately after amplification, these three wells are simply pooled in a 1:1:1 ratio. These simple steps reduce pipetting, waste, and opportunity for error.

→ Minimal pipetting
→ No quantification required
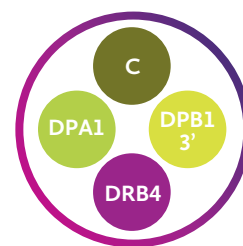→ Continue straight to library preparation
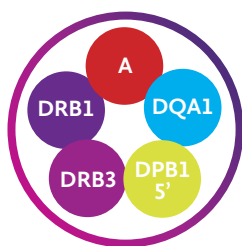
Mix A

A	µl/reaction
Primer Mix A	2.00
LongMix	3.75
Water	8.25
DNA	1.00
Total	15.0
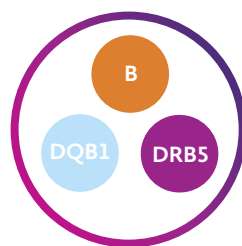
Mix B

B	µl/reaction
Primer Mix B	2.00
LongMix	3.75
Water	8.25
DNA	1.00
Total	15.0

Mix C

C	µl/reaction
Primer Mix C	2.00
LongMix	3.75
Water	8.25
DNA	1.00
Total	15.0

One cycling protocol
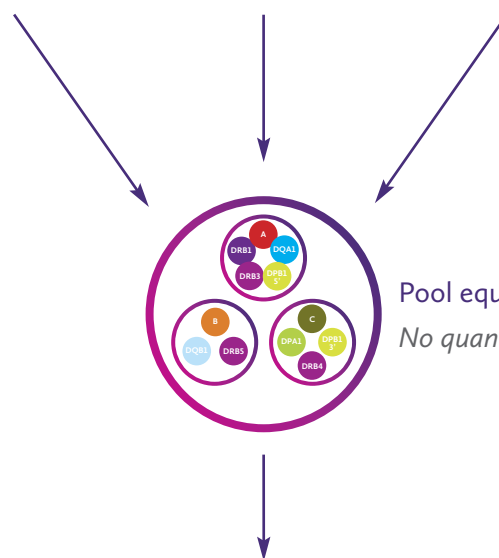
Pool equal volumes into one tube
No quantification required

Use 2 µl for library preparation
No quantification required

EFFICIENT LIBRARY PREPARATION

The NGSgo library preparation is renowned for its ease-of-use and efficiency. The intelligent design minimizes the amount of cleanups and quantifications. The NGSgo library preparation is compatible with NGSgo-MX11-3 and all other NGSgo amplification products.

→ 3.5 h library preparation
→ Only 2 bead cleanups
→ Only 1 quantification

The NGSgo workflow

Amplification
▼
Fragmentation & Adapter ligation
▼
bead cleanup (per sample)
▼
Indexing PCR
▼
Library pooling
▼
bead cleanup (1 tube)
▼
Qubit quantification
▼
Sequencing

ALL LIBRARY PREPARATION REAGENTS IN ONE KIT

The NGSgo Library Full Kit contains all the reagents you need for fast and efficient library preparation of 96 samples, and is also suitable for use on a liquid handler.
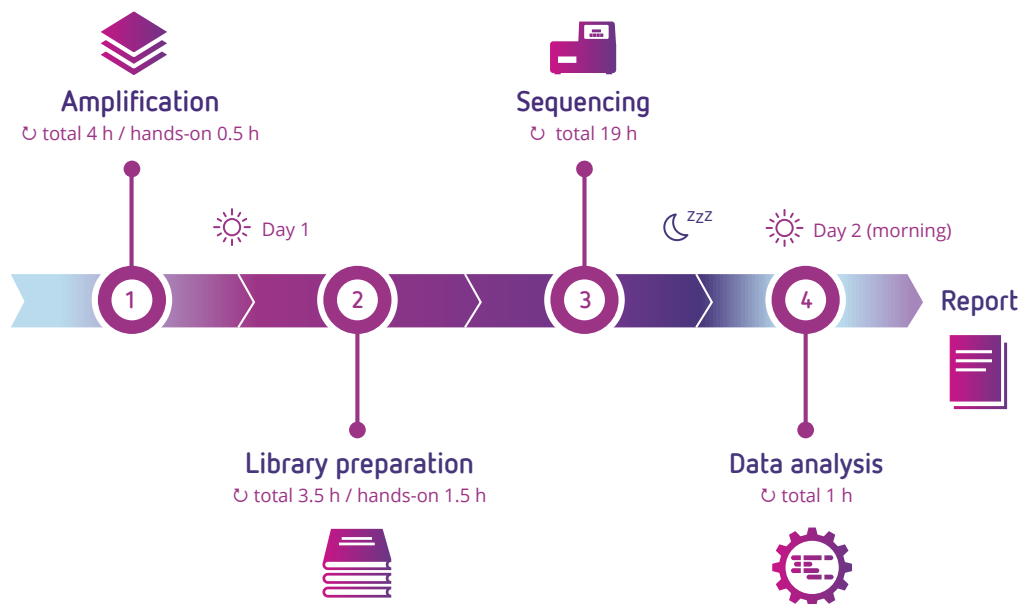
→ Contains library prep and indexing reagents
→ Includes GenDx-AMPure XP beads
→ Suitable for workflow automation

FROM DNA TO REPORT IN 1.5 DAYS

Start your amplification on day 1 and have your typing report on day 2 before noon. You can run 16 samples on an Illumina micro flow cell.

→ Amplification and library prep on day 1
→ Sequencing overnight
→ Typing report next morning

Amplification
↻ total 4 h / hands-on 0.5 h

Sequencing
↻ total 19 h

☀ Day 1

☾ ᶻᶻᶻ   ☀ Day 2 (morning)

1   2   3   4   **Report**

Library preparation
↻ total 3.5 h / hands-on 1.5 h

Data analysis
↻ total 1 h

FLEXIBILITY TO ADD SINGLE GENES

NGSgo-MX11-3 offers complete flexibility in the sample setup. In combination with the available single-locus primers, you can repeat single loci, add single genes from another workflow, or add disease association samples. This saves reagent cost, space on the plate, and most importantly, space on the flow cell.

→ All HLA loci available as singleplex
→ Add KIR and MICA/MICB
→ Save space on the flow cell

SUITABLE FLOW CELLS FOR YOUR SAMPLE SIZE

When using NGSgo-MX11-3 on an Illumina MiSeq, you can choose to run a nano, micro, or standard flow cell, to perfectly suit your sample size. NGSgo-MX11-3 is also compatible with other Illumina sequencers such as iSeq 100 and MiniSeq.

Nano flow cell • 4 samples

Step	Time
Amplification	4 h
Library preparation	3.5 h
Sequencing	17 h
NGSengine analysis	0.5 h
Total time	25 h

Micro flow cell • 16 samples

Step	Time
Amplification	4 h
Library preparation	3.5 h
Sequencing	19 h
NGSengine analysis	1 h
Total time	27.5 h

Standard flow cell • 60 samples

Step	Time
Amplification	4.5 h
Library preparation	4 h
Sequencing	24 h
NGSengine analysis	4 h
Total time	36.5 h

Recommended maximum number of samples per flow cell using MiSeq reagent kit v2 (300 cycles).

NO MAJOR EQUIPMENT INVESTMENTS

The NGSgo workflow design facilitates execution of the assay with no further capital equipment purchases outside the sequencer and the thermal cycler. The only extra tool needed is a Qubit.

→ No qPCR instrument
→ No plate fluorometer
→ No server for data analysis

NGSengine®

BEST-IN-CLASS SOFTWARE FOR HLA TYPING

NGSengine delivers reliable genotyping results with minimal editing. Analysis is fast and can be done on a regular laptop within minutes. The easy navigation let you quickly see the HLA typing results and important quality metrics such as allelic balance and noise levels. Color-coded thresholds provide easy interpretation of data quality.

→ Intuitive navigation

→ Extremely fast

→ Allelic balance and noise plots
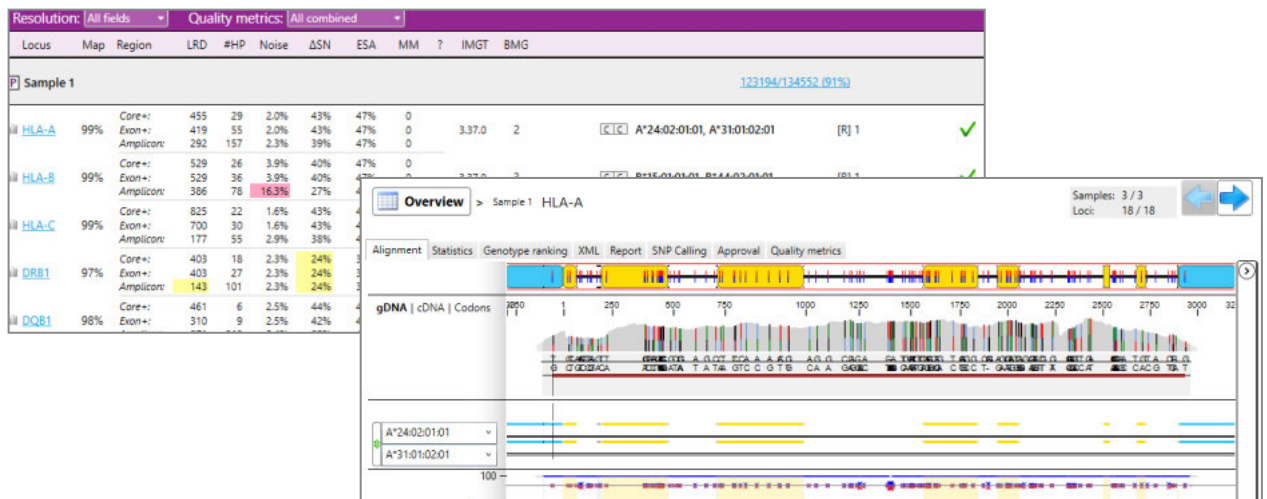

HIGHEST DATA QUALITY IN MULTIPLEXING

The NGSgo-MX11-3 three-tube design results in the highest quality data available for a multiplex product. The noise observed with NGSgo-MX11-3 is similarly low compared to a single locus amplification strategy, and significantly lower compared to the noise levels expected in a one-tube multiplex. Low noise equals higher data quality, meaning more reliable genotyping results.

→ Low noise

→ Data quality comparably to singleplex

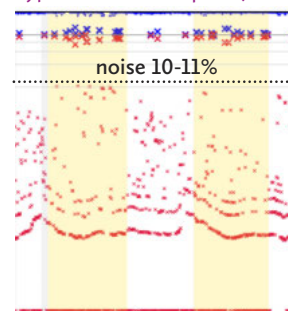→ Highly reliable typing results

NGSgo-AmpX v2
Typical noise singleplex

noise 2-3%
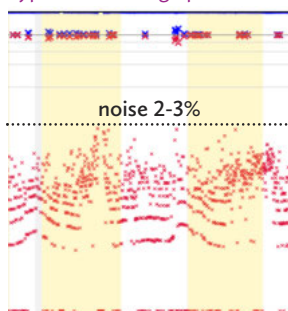
NGSgo-MX11-3
Typical noise multiplex (3 tubes)

noise 3-4%
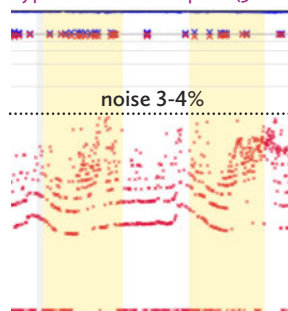
Typical noise multiplex (1 tube)

noise 10-11%

Support

ORDERING DETAILS

Product		Reactions	Catalog number
NGSgo®-MX11-3	Multiplexed HLA amplification 11 loci	96	7371864
NGSgo® Library Full Kit	Library Preparation and Indexing Kit For Illumina – IndX plate I	96	2342156

For research use only.

CHALLENGE US WITH YOUR QUESTIONS

Our Support team can assist you with product questions, practical matters, data interpretation, and more.

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