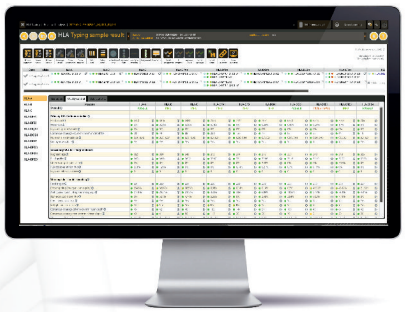
World leader in HLA by NGS

RUO

Monotype ABO™ ABO Typing by NGS

NGS-BASED ABO MOLECULAR TYPING KIT FOR USE ON ILLUMINA SEQUENCING PLATFORMS.

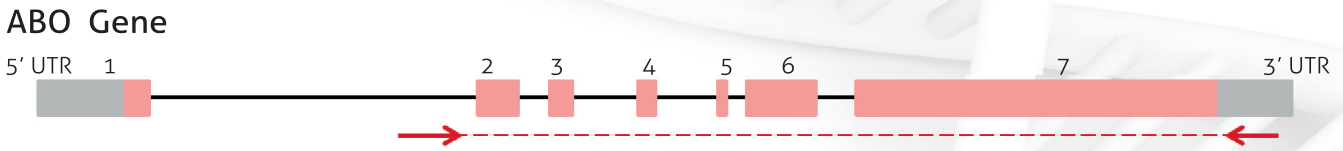
- The ABO assay leverages the power of the Holotype HLA™ workflow, providing high throughput and allele level resolution genotyping of the ABO gene.
- The analysis of molecular level ABO data is supported by HLA Twin™, the most accurate genotyping software for the processing of NGS data.



Product Description

Monotype ABO™ is a long-range amplification kit covering Exons 2-7 of the ABO gene, and the resulting libraries can be sequenced on Illumina instruments with 2*150bp paired-end reads. The Software to analyze the ABO gene is Omixon's HLA Twin™, that uses a modified version of the Consensus Genotyping (CG) algorithm already used for the genotyping and characterization of the HLA loci. The long-range PCR, the paired-end sequencing and the CG algorithm in HLA Twin™ allows for complete genetic characterization and gene-level phasing of the ABO locus to give scientists the highest possible confidence in the results.

ABO Gene Coverage



Product Highlights

Comprehensive Gene Coverage	Exon 2-7
Identical Workflow with Holotype HLA™	Less QC, increased lab expertise
Integrated	HLA Twin™ automatically analyzes ABO
Cost Effective	Process with Holotype HLA™ or as independent libraries
Beneficial for Registries	Increases probability for donor selection
Ultra-High Throughput	Up to 576* unique barcodes available
Automation	Script for pre/post PCR
Technician-Friendly Protocol	Multiple safe stopping points

** Lead time for >288 barcodes varies. Consult your local sales representative for an accurate estimated delivery.*

Sample Preparation

- Only 80 ng of DNA required for amplification

Library Preparation

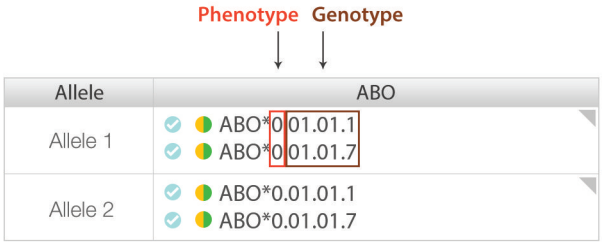
- Combine up to 576 samples per run***
- 4 hours hands on time for 192 samples
- Less than 48 hours turnaround time from sample to result

Analysis with HLA Twin™

- Automated genotyping after completed sequencing run
- Two independent algorithm-analysis for allele-level genotyping
- Supports clinical and research workflows
- 20 Quality Control metrics for confident assignment
- Support for Windows, Linux and OSX, standalone and server-client setups

Sequencing

- ABO libraries can be combined with other libraries for optimized sequencing cost
- MiniSeq, MiSeq and NextSeq supported
- Any type of flow cell supported depending on throughput
- 300 and 500-cycle chemistry supported



WHAT IS INCLUDED IN THE KIT?
ABO specific primers for 24 or 96 samples
Library Preparation Reagents for 24 or 96 samples
96 Well Adaptor Plate with indexed adaptors
NGS Excel Workbook
HLA Twin™ - dual algorithm genotyping software

TECHNICAL AND EQUIPMENT REQUIREMENTS
MiniSeq, MiSeq or NextSeq
Thermal Cycler
Plate fluorometer or qPCR instrument
64-bit computer with a minimum of 16 GB RAM
Library Size Selection: Pippin Prep or Magnetic Beads

Product Configuration

PRODUCT NAME	SIZES	INDEX SETS
Monotype ABO™	24 or 96	4 x 24 sets 6 x 96 sets***

All timings are for 192 samples, Monotype ABO V1.0

* *Timings are based on the Biomek 4000 by Beckman Coulter.*

** *On a MiSeq 300-cycle micro flow cell*

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All Omixon activities covered by an ISO 13485:2003 & EN ISO 13485:2012 Quality Management System (QMS)