CŌRE DIAGNOSTICS™

HLA GENOTYPING

HLA genotyping is the identification of the HLA class I and class II gene polymorphisms for individuals. Unambiguous HLA genotyping is technically challenging owing to high polymorphism in various genomic regions. The development of NGS has changed this landscape of genotyping. High-resolution HLA genotyping by using PCR and NGS is uniquely able to address limitations of traditional HLA genotyping and Sanger sequencing assays in patients. It enables robust, simple, high-quality, and high-throughput analysis of the key HLA genes, data can be phased to a minimum of 6 digits. Another advantage is that phasing problem is determined since DNA templates are derived from single molecules.

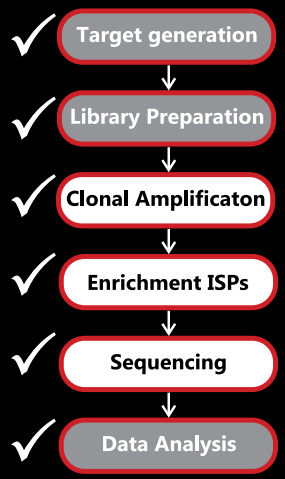
HLA TYPING WORKFLOW

Our highly experienced expert team executes quality management following every procedure to ensure comprehensive and accurate results. Our HLA typing workflow is outlined below, including DNA isolation, HLA gene capture, library preparation, high-throughput sequencing, and bioinformatics analysis. Sample required is Whole blood collected in EDTA vial (Optimum volume: 2-3 mL) or buccal swab.

HLA TYPING ADVANTAGES @CORE DIAGNOSTICS

- High resolution and 100% accuracy
- Flexible testing sites: such as HLA class I (A, B, C) and HLA class II (DQB1, DPB1 and DRB1)
- Strict quality control and rich practical experience
- Sample-to-Report Solution
- Reporting always on latest IMGT database.

Workflow Summary



- Amplification
- LIbrary preparation
  - ragmentation and end repair
  - adapter ligation
  - size selection with SPRI beads
- Emulsion PCR or Isotheral Amplification
- Enrichment of ISPs
- Sequencing by separate flows of dNTPs
- Data Analysis with Torrent Browser and N