

Molecular HLA Typing

Introduction: All patients (Recipients and Donors) have a DNA analysis to determine their HLA Class I and Class II antigens

1. Principles of the SSO Procedure with Immucor DNA HLA Typing Kits

The Immucor HLA-SSO typing procedure is based on the hybridization of a biotin labeled single stranded PCR product to SSO probes. After hybridization, addition of Phycoerythrin Conjugated Streptavidin solution (SA-PE) to the bead-DNA mixture results in Streptavidin binding to the biotinylated DNA. PE labeled beads are then detected in the Luminex instrument and analyzed.

2. SSP DNA Analysis

SSP (Sequence Specific Primers). In this test DNA is mixed with multiple primer sequences corresponding to known HLA alleles and placed in a Thermal Cycler. All reactions are transferred to an Agarose gel. After a short electrophoresis, the gel is documented in a U.V. box. The absence or presence of amplified DNA will determine the HLA alleles present.

Specimens: DNA is primarily obtained from K2 EDTA tubes (purple top). DNA can also be obtained from tissue (spleen/ lymph nodes) or lymphocytes.