

HLA

General:

The human leukocyte antigen system (HLA) is the name of the major histocompatibility complex (MHC) in humans. The superlocus contains a large number of genes related to immune system function in humans. This group of genes is located on chromosome 6, and encodes cell-surface antigen-presenting proteins and many other genes. The HLA genes are the human versions of the major histocompatibility complex (MHC) genes that are found in most vertebrates, and are the best studied of the MHC genes. The proteins encoded by certain genes are also known as antigens, as a result of their historic discovery as factors in organ transplantations. The major HLA antigens are essential elements in immune function. Different classes have different functions.

HLA class I antigens (A, B & C) present peptides from inside the cell (including viral peptides if present). These peptides are produced from digested proteins that are broken down in the proteasomes. The peptides are generally small polymers, about 9 amino acids in length. Foreign antigens attract killer T-cells (also called CD8 positive cells) that destroy cells.

HLA class II antigens (DP, DQ, & DR) present antigens from outside the cell to T-lymphocytes. These particular antigens stimulate T-helper cells to reproduce, and these T-helper cells then stimulate antibody-producing Bcells. Self-antigens are suppressed by suppressor T-cells.

The following tests are available:

- **HLA typing (class I: A, B, C and class II: DQ, DR)**

Indication: pre-transplantation

Material: 10 ml EDTA-blood

TAT: 3- 4 weeks*

Method: PCR

Ref.- range: see report

Note: HLA DQA1 is only done upon request

- **HLA A alleles, group typing**

Material: 10 ml CPDA + 3 ml EDTA blood

TAT: 3- 4 weeks*

Method: PCR

- **HLA B alleles, group typing**
Material: 3 ml EDTA blood
TAT: 3- 4 weeks*
Method: PCR
- **HLA C alleles, group typing**
Material: 3 ml EDTA blood
TAT: 3- 4 weeks*
Method: PCR
- **HLA DQ alleles, group typing**
Material: 3 ml EDTA blood
TAT: 3- 4 weeks*
Method: PCR
- **HLA DR alleles, group typing**
Material: 3 ml EDTA blood
TAT: 3- 4 weeks*
Method: PCR
- **HLA DQA1 alleles, group typing**
Material: 3 ml EDTA blood
TAT: 3- 4 weeks*
Method: PCR
- **HLA B27 single antigen[^]**
Material: 2 ml EDTA blood
TAT: 3 days, FML
Method: PCR
- **HLA B5 single antigen**
Material: 3 ml EDTA blood
TAT: 10-14 days*
Method: Flow

- **HLA B8 single antigen**

Indication: Suspicion of myasthenia gravis, celiac disease, Sjogren's syndrome

Material: 3 ml EDTA blood

TAT: 10-14 days*

Method: PCR

Ref.range: Negative

- **Other single HLA antigens**

General:

Nearly all HLA-antigens can be performed as single antigen test. Please confirm and check the pricing with the laboratory before requesting.

For complete list of laboratory test offered at Freiburg Medical Laboratory, please visit <http://www.fml-dubai.com/parameter-listings/>