About us

CeGaT was founded in 2009 in Tübingen, Germany. Our scientists are specialized in next-generation sequencing (NGS) for genetic diagnostics, and we also provide a variety of sequencing services for research purposes and pharma solutions. Our portfolio is complemented by non-sequencing-based methods such as immunomonitoring.

Our dedicated project management team of scientists and bioinformaticians works closely with you to develop the best strategy for the realization of your project. Depending on its scope, we select the most suitable library preparation and sequencing conditions on our Illumina platforms.

We would be pleased to provide you with our award-winning service. Contact us today to start planning your next project.

CeGaT GmbH
Research & Pharma Solutions
Paul-Ehrlich-Str. 23
72076 Tübingen
Germany
Phone: +49 7071 56544-333
Fax: +49 7071 56544-56
Email: ngs@cegat.de

HLA Typing
Research & Pharma Solutions
The Human Leucocyte Antigen (HLA) system is a group of genes encoding proteins that determine the human specific immune response. This region is highly polymorphic and contains six classical genes: class I HLA-A, -B and -C, and class II HLA-DRB1, -DQB1 and -DPB1. Furthermore, the HLA region is known to be associated with more than 100 multifactorial, complex diseases mainly of inflammatory and autoimmune pathogenesis.

In order to find out more about the functions and complex interactions of the HLA system, next-generation sequencing (NGS) based HLA typing can be very helpful. For instance, it can identify HLA-matched donor-recipient pairs for transplantation, facilitate individual therapy response using pharmacogenetics, or provide information on specific responses for immunotherapy of cancer.

CeGaT offers two HLA typing options:

- **HLA class I typing:**
  Analysis is performed with a special algorithm (OptiType) based on Whole Exome Sequencing data.

- **Combined HLA class I and HLA class II typing:**
  Sequencing libraries are generated with the TruSight HLA Panel (Illumina). Data evaluation is done with the Assign TruSight HLA software (Illumina).

CeGaT’s HLA sequencing service offers reliable and accurate insights into HLA types. Our service covers all steps from DNA extraction to data analysis. With our long-standing expertise in the diagnostic field, our clients benefit from strict quality control standards and therefore high quality results.

### Explore our HLA typing product portfolio

<table>
<thead>
<tr>
<th>Choose your option →</th>
<th>HLA I</th>
<th>HLA I + HLA II</th>
</tr>
</thead>
<tbody>
<tr>
<td>HLA type</td>
<td>HLA class I (A, B, C)</td>
<td>HLA class I (A, B, C), HLA class II (DR, DQ, DP)</td>
</tr>
<tr>
<td>Species</td>
<td>Human</td>
<td></td>
</tr>
<tr>
<td>DNA quality</td>
<td>High molecular weight DNA</td>
<td></td>
</tr>
<tr>
<td>Protocol</td>
<td>Whole Exome Sequencing (Twist Bioscience)</td>
<td>TruSight HLA Sequencing Panel (Illumina)</td>
</tr>
<tr>
<td>Evaluation software</td>
<td>OptiType</td>
<td>Assign TruSight HLA</td>
</tr>
<tr>
<td>Sequencing technology</td>
<td>Illumina NovaSeq 6000</td>
<td>Illumina MiSeq</td>
</tr>
<tr>
<td>Read length</td>
<td>2 x 100 bp</td>
<td>2 x 150 bp</td>
</tr>
<tr>
<td>Output</td>
<td>50x mean coverage</td>
<td>100x mean coverage</td>
</tr>
<tr>
<td>Sequencing data</td>
<td>FASTQ</td>
<td></td>
</tr>
<tr>
<td>HLA report</td>
<td>XLS, PDF</td>
<td></td>
</tr>
</tbody>
</table>