consensus HLA Report

Patient COLO829

13 July, 2022

This HLA report was generated using the consHLA toolkit on 13 July, 2022.

Summary of Clinically Relevant HLA Consensus Alleles

Class-I

| HLA-A | HLA-B | HLA-C |
|-------|-------|-------|
| 01:01 | 08:01 | 07:01 |
| 01:01 | 40:02 | 03:04 |

Class-II

| 01:02 03:01 01:01 Not typed Not typed 01:01 11:01 02:02 Not typed Not typed | HLA-DRA | HLA-DRB1 | HLA-DRB3 | HLA-DRB4 | HLA-DRB5 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------|----------|----------|----------|----------|
| | 0-10- | 00.0- | 00- | 0.1 | 0 1 |

| HLA-DQA1 | HLA-DQB1 | HLA-DPA1 | HLA-DPB1 |
|----------|----------|----------|----------|
| 05:05 | 03:01 | 01:03 | 02:01 |
| 05:01 | 02:01 | 02:01 | 01:01 |

Consensus Alleles

| HLA Gene Allele 1 Allele 2 HLA-A 01:01:01 01:01:01 HLA-B 08:01:04 40:02:01 HLA-C 07:01:01 03:04:01 HLA-DRA 01:02:02 01:01:01 HLA-DRB1 03:01:01 11:01:01 HLA-DRB3 01:01:02 02:02:01 HLA-DRB4 Not typed Not typed HLA-DRB5 Not typed Not typed HLA-DRB5 Not typed Not typed HLA-DQA1 05:05:01 05:01:01 HLA-DQB1 03:01:01 02:01:02 HLA-DQB1 03:01:01 02:01:02 HLA-DPB1 02:01:02 01:01:01 HLA-DMA 01:01:01 01:01:01 HLA-DMB 01:01:01 01:01:01 HLA-DOA 01:01:02 01:01:03 HLA-DRB2 01:01 01:01:03 HLA-DRB6 Not typed Not typed HLA-DRB7 Not typed Not typed HLA-DRB8 Not typed Not typed | | | |
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| HLA-B 08:01:04 40:02:01 HLA-C 07:01:01 03:04:01 HLA-DRA 01:02:02 01:01:01 HLA-DRB1 03:01:01 11:01:01 HLA-DRB3 01:01:02 02:02:01 HLA-DRB4 Not typed Not typed HLA-DRB5 Not typed Not typed HLA-DRB5 Not typed Not typed HLA-DQA1 05:05:01 05:01:01 HLA-DQB1 03:01:01 02:01:02 HLA-DPA1 01:03:01 02:01:02 HLA-DPB1 02:01:02 01:01:01 HLA-DMA 01:01:01 01:01:01 HLA-DMB 01:01:01 01:01:02 HLA-DOA 01:01:02 01:01:02 HLA-DRB2 01:01 01:01:03 HLA-DRB3 Not typed Not typed HLA-DRB6 Not typed Not typed HLA-DRB9 Not typed Not typed HLA-DRB9 Not typed Not typed HLA-F 01:01:03 01:01:03 | HLA Gene | Allele 1 | Allele 2 |
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| HLA-DQA1 05:05:01 05:01:01 HLA-DQB1 03:01:01 02:01:02 HLA-DPA1 01:03:01 02:01:02 HLA-DPB1 02:01:02 01:01:01 HLA-DMA 01:01:01 01:01:01 HLA-DMB 01:01:01 01:01:01 HLA-DOA 01:01:02 01:01:02 HLA-DOB 01:01:03 01:01:03 HLA-DRB2 01:01 01:01 HLA-DRB6 Not typed Not typed HLA-DRB7 Not typed Not typed HLA-DRB8 Not typed Not typed HLA-DRB9 Not typed Not typed HLA-E 01:01:01 01:01:01 HLA-F 01:01:03 01:01:03 HLA-G 01:01:02 01:01:02 HLA-H 02:01:01 02:01:01 HLA-J 01:01:01 01:01:01 | HLA-DRB4 | Not typed | Not typed |
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| HLA-DMA 01:01:01 01:01:01 HLA-DMB 01:01:01 01:01:01 HLA-DOA 01:01:02 01:01:02 HLA-DOB 01:01:03 01:01:03 HLA-DRB2 01:01 01:01 HLA-DRB6 Not typed Not typed HLA-DRB7 Not typed Not typed HLA-DRB8 Not typed Not typed HLA-DRB9 Not typed Not typed HLA-E 01:01:01 01:01:01 HLA-F 01:01:03 01:01:03 HLA-G 01:01:02 01:01:02 HLA-H 02:01:01 02:01:01 HLA-J 01:01:01 01:01:01 | HLA-DPA1 | 01:03:01 | 02:01:02 |
| HLA-DMB 01:01:01 01:01:01 HLA-DOA 01:01:02 01:01:02 HLA-DOB 01:01:03 01:01:03 HLA-DRB2 01:01 01:01 HLA-DRB6 Not typed Not typed HLA-DRB7 Not typed Not typed HLA-DRB8 Not typed Not typed HLA-DRB9 Not typed Not typed HLA-DRB9 Not typed Not typed HLA-E 01:01:01 01:01:01 HLA-F 01:01:03 01:01:03 HLA-G 01:01:02 01:01:02 HLA-H 02:01:01 01:01:01 | HLA-DPB1 | 02:01:02 | 01:01:01 |
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| HLA-DRB6 Not typed Not typed HLA-DRB7 Not typed Not typed HLA-DRB8 Not typed Not typed HLA-DRB9 Not typed Not typed HLA-E 01:01:01 01:01:01 HLA-F 01:01:03 01:01:03 HLA-G 01:01:02 01:01:02 HLA-H 02:01:01 02:01:01 HLA-J 01:01:01 01:01:01 | HLA-DOB | 01:01:03 | 01:01:03 |
| HLA-DRB7 Not typed Not typed HLA-DRB8 Not typed Not typed HLA-DRB9 Not typed Not typed HLA-E 01:01:01 01:01:01 HLA-F 01:01:03 01:01:03 HLA-G 01:01:02 01:01:02 HLA-H 02:01:01 02:01:01 HLA-J 01:01:01 01:01:01 | HLA-DRB2 | 01:01 | 0 |
| HLA-DRB8 Not typed Not typed HLA-DRB9 Not typed Not typed HLA-E 01:01:01 01:01:01 HLA-F 01:01:03 01:01:03 HLA-G 01:01:02 01:01:02 HLA-H 02:01:01 02:01:01 HLA-J 01:01:01 01:01:01 | HLA-DRB6 | Not typed | Not typed |
| HLA-DRB9 Not typed Not typed HLA-E 01:01:01 01:01:01 HLA-F 01:01:03 01:01:03 HLA-G 01:01:02 01:01:02 HLA-H 02:01:01 02:01:01 HLA-J 01:01:01 01:01:01 | | | |
| HLA-E 01:01:01 01:01:01 HLA-F 01:01:03 01:01:03 HLA-G 01:01:02 01:01:02 HLA-H 02:01:01 02:01:01 HLA-J 01:01:01 01:01:01 | HLA-DRB8 | Not typed | Not typed |
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| HLA-G 01:01:02 01:01:02 HLA-H 02:01:01 02:01:01 HLA-J 01:01:01 01:01:01 | HLA-E | 01:01:01 | 01:01:01 |
| HLA-H 02:01:01 02:01:01 HLA-J 01:01:01 01:01:01 | HLA-F | 01:01:03 | 01:01:03 |
| HLA-J 01:01:01 01:01:01 | HLA-G | 01:01:02 | 01:01:02 |
| | HLA-H | 02:01:01 | 02:01:01 |
| TTT 4 TZ 01 01 01 01 01 01 01 | HLA-J | | 01:01:01 |
| | HLA-K | 01:01:01 | 01:01:01 |
| HLA-L 01:01:02 01:01:02 | | | |
| HLA-V 01:01:01 01:01:01 | HLA-V | 01:01:01 | 01:01:01 |

Appendix

HLA Typing Method

The consensus HLA typing module uses HLA-HD (v1.4.0) to conduct HLA typing from Tumour and Germline WGS and Tumour RNAseq (optional) for a given patient, producing two or three sets of candidate alleles. For each typed HLA gene, a pair of consensus alleles is calculated based on concordance between the candidate allele sets.

The first page of the HLA report displays a 'clinically significant' subset of HLA alleles in a format which mimics that of a clinical HLA report and is therefore familiar to clinicians. The 'clinically significant' HLA subset includes most of the protein coding Class I and II HLA genes which are implicated in peptide presentation to T cells while excluding HLA Class I pseudogenes (HLA-H, -J, -K, -L, -V), non-classical Class I genes (HLA-E, -F, -G), Class II pseudogenes (HLA-DRB2, -DRB6, -DRB7, -DRB8, and -DRB9), and the non-classical Class II genes (HLA-DOA, -DOB, -DMA and -DMB). The second page of the report displays a table of all HLA alleles typed by the consHLA module (using HLA-HD), including the clinically relevant subset which is highlighted in bold text.