**Locus: HLA-A** 

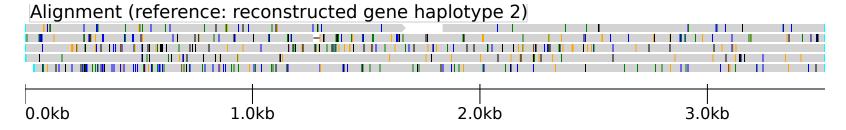
Resolution: 4th field

### Full typing result:

HLA-A\*02:1136 | HLA-A\*02:734 | HLA-A\*02:1168

### bam coverage

variants



HLA-A\*02:02:01:01 (identity: 99.91%)

HLA-A\*02:02:04 (identity: 99.89%)

HLA-A\*02:02:08 (identity: 99.89%)

HLA-A\*02:1136 (identity: 99.89%)

HLA-A\*02:734 (identity: 99.89%)

HLA-A\*02:1168 (identity: 99.89%)

Locus: HLA-A

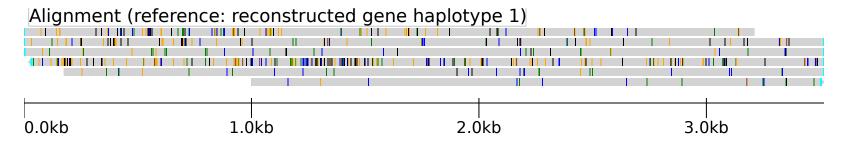
Resolution: 4th field

Full typing result:

HLA-A\*02:05:01:01

bam coverage

variants



HLA-A\*02:05:01:01 (identity: 100.00%)

**Locus: HLA-B** 

Resolution: 4th field

Full typing result:

HLA-B\*15:10:01:01 | HLA-B\*15:18:01:02

bam coverage

variants

Alignment (reference: reconstructed gene haplotype 1)

0.0kb 1.0kb 2.0kb 3.0kb 4.0kb

HLA-B\*15:10:01:01 (identity: 99.90%)

HLA-B\*15:18:01:02 (identity: 99.88%)

Locus: HLA-B

Resolution: 4th field

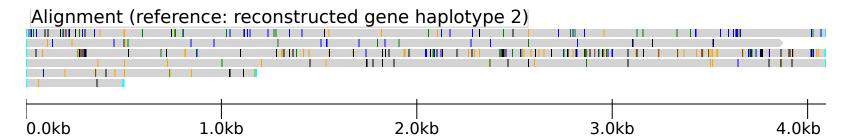
Full typing result:

HLA-B\*58:01:01:01

bam coverage

L 4

variants



HLA-B\*58:01:01:01 (identity: 100.00%)

**Locus: HLA-C** 

Resolution: 4th field

Full typing result:

HLA-C\*08:04:01:01

bam coverage

variants

Alignment (reference: reconstructed gene haplotype 2)

0.0kb 1.0kb 2.0kb 3.0kb 4.0kb

HLA-C\*08:04:01:01 (identity: 100.00%)

**Locus: HLA-C** 

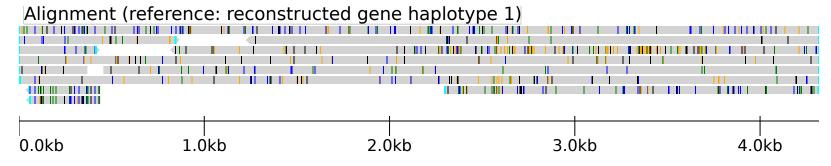
Resolution: 4th field

#### Full typing result:

HLA-C\*07:1082 | HLA-C\*07:18:12

#### bam coverage

variants



HLA-C\*07:18:01:01 (identity: 99.98%)

HLA-C\*07:112 (identity: 99.95%)

HLA-C\*07:173 (identity: 99.95%)

HLA-C\*07:1082 (identity: 99.95%)

HLA-C\*07:18:12 (identity: 99.95%)

**Locus: HLA-DMA** 

Resolution: 4th field

Full typing result:

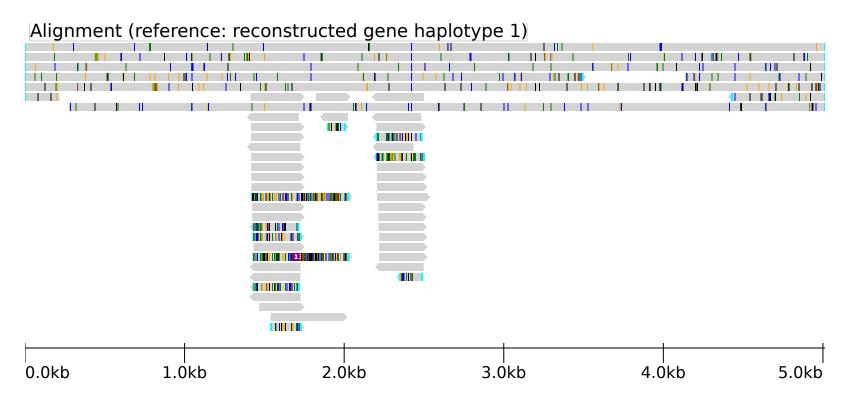
HLA-DMA\*01:01:01:02

## bam coverage

L 16

variants





HLA-DMA\*01:01:01:02 (identity: 99.96%)

**Locus: HLA-DMB** 

Resolution: 4th field

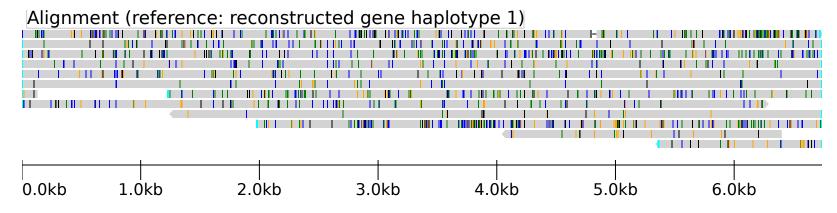
Full typing result:

HLA-DMB\*01:03:01:03

bam coverage

 $-\frac{11}{7}$ 

variants



HLA-DMB\*01:03:01:03 (identity: 99.97%)

**Locus: HLA-DOA** 

Resolution: 4th field

Full typing result:

HLA-DOA\*01:01:05

bam coverage

variants

HLA-DOA\*01:01:05 (identity: 100.00%)

Locus: HLA-DOA

Resolution: 4th field

### Full typing result:

HLA-DOA\*01:01:02:20

# bam coverage

variants

Alignment (reference: reconstructed gene haplotype 2) 2.0kb 0.0kb 1.0kb 3.0kb

HLA-DOA\*01:01:02:20 (identity: 99.97%)

**Locus: HLA-DOB** 

Resolution: 4th field

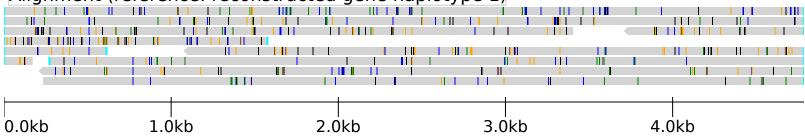
Full typing result:

HLA-DOB\*01:01:01:01

### bam coverage

variants

Alignment (reference: reconstructed gene haplotype 1)



HLA-DOB\*01:01:01:01 (identity: 100.00%)

**Locus: HLA-DPA1** 

Resolution: 4th field

## Full typing result:

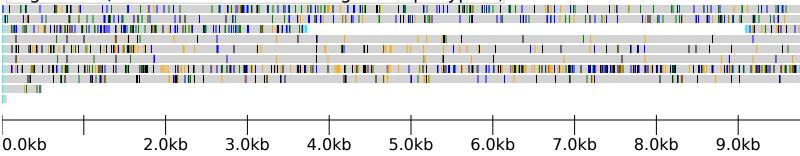
HLA-DPA1\*02:01:08:03 | HLA-DPA1\*02:01:01:02 | HLA-DPA1\*02:01:02:03

HLA-DPA1\*02:26:01:01 HLA-DPA1\*02:84

#### bam coverage

variants

Alignment (reference: reconstructed gene haplotype 1)



HLA-DPA1\*02:01:08:03 (identity: 99.98%)

HLA-DPA1\*02:01:01:02 (identity: 99.97%)

HLA-DPA1\*02:01:02:03 (identity: 99.96%)

HLA-DPA1\*02:26:01:01 (identity: 99.96%)

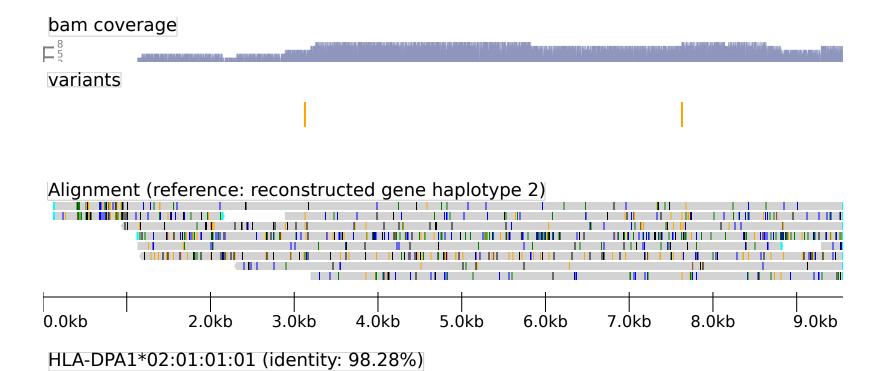
HLA-DPA1\*02:84 (identity: 99.95%)

**Locus: HLA-DPA1** 

Resolution: 4th field

Full typing result:

HLA-DPA1\*02:01:01:01



**Locus: HLA-DPA2** 

Resolution: 4th field

## Full typing result:

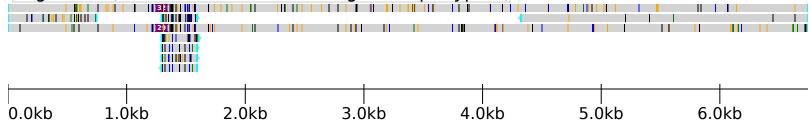
HLA-DPA2\*02:01:01:01

bam coverage

variants



Alignment (reference: reconstructed gene haplotype 2)



HLA-DPA2\*02:01:01:01 (identity: 99.63%)

**Locus: HLA-DPA2** 

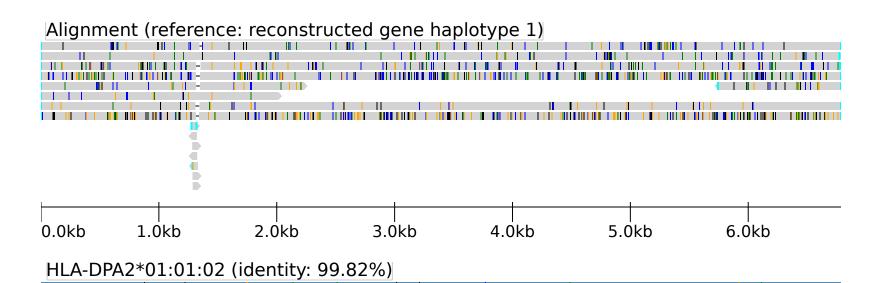
Resolution: 4th field

Full typing result:

HLA-DPA2\*01:01:02

bam coverage

variants



Locus: HLA-DPB1

Resolution: 4th field

#### Full typing result:

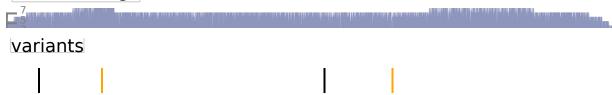
HLA-DPB1\*13:01:01 | HLA-DPB1\*110:01 | HLA-DPB1\*1145:01 |

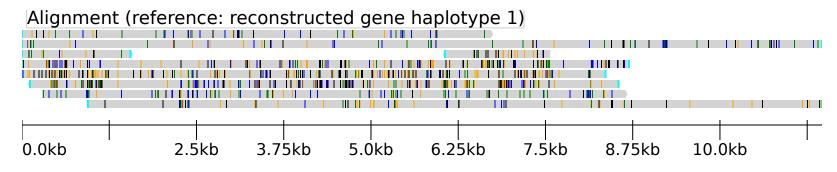
HLA-DPB1\*1260:01N | HLA-DPB1\*13:01:01:08 | HLA-DPB1\*13:01:01:13 |

HLA-DPB1\*13:01:01:14 | HLA-DPB1\*13:01:01:15 | HLA-DPB1\*13:01:05 |

HLA-DPB1\*13:01:06

bam coverage





HLA-DPB1\*13:01:01:01 (identity: 100.00%)

HLA-DPB1\*110:01 (identity: 99.99%)

HLA-DPB1\*1145:01 (identity: 99.99%)

HLA-DPB1\*1260:01N (identity: 99.99%)

HLA-DPB1\*13:01:01:08 (identity: 99.99%)

HLA-DPB1\*13:01:01:13 (identity: 99.99%)

HLA-DPB1\*13:01:01:14 (identity: 99.99%)

HLA-DPB1\*13:01:01:15 (identity: 99.99%)

HLA-DPB1\*13:01:05 (identity: 99.99%)

HLA-DPB1\*13:01:06 (identity: 99.99%)

Locus: HLA-DPB1

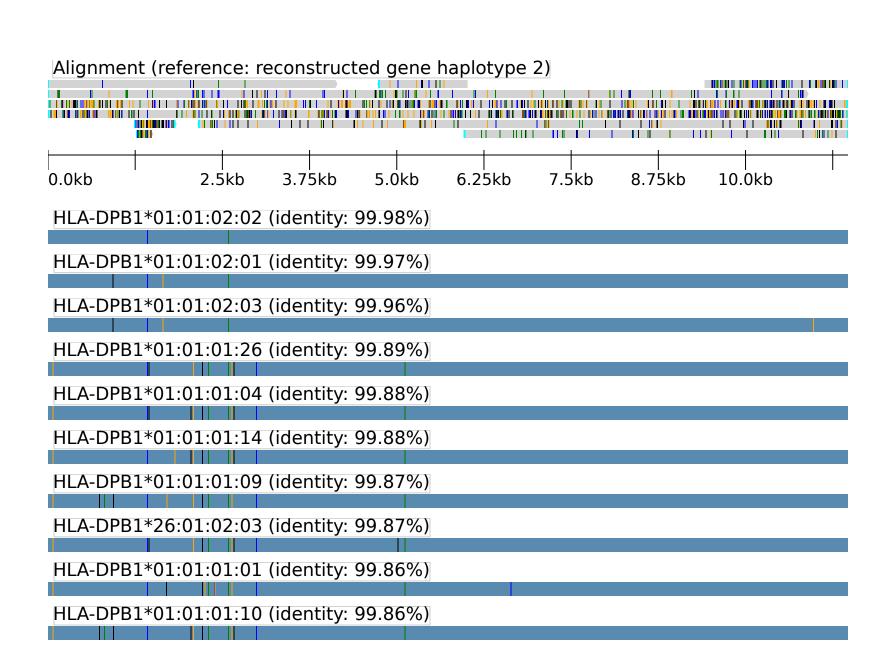
Resolution: 4th field

#### Full typing result:

HLA-DPB1\*01:01:02:02 | HLA-DPB1\*01:01:02:01 | HLA-DPB1\*01:01:02:03 HLA-DPB1\*01:01:01:26 | HLA-DPB1\*01:01:04 | HLA-DPB1\*01:01:14 HLA-DPB1\*01:01:01:09 | HLA-DPB1\*26:01:02:03 | HLA-DPB1\*01:01:01:01 HLA-DPB1\*01:01:01:10

#### bam coverage

variants



**Locus: HLA-DPB2** 

Resolution: 4th field

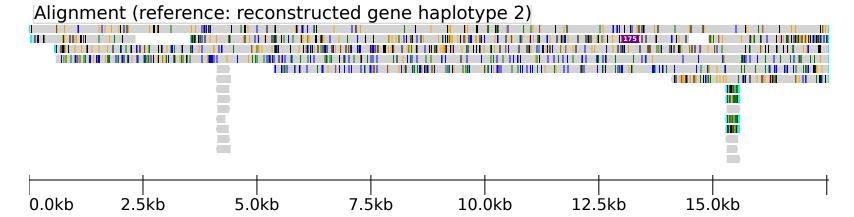
Full typing result:

HLA-DPB2\*01:01:02



L 8 8

variants



HLA-DPB2\*01:01:02 (identity: 99.30%)

Sample: NA19127 **Locus: HLA-DPB2** Resolution: 4th field Full typing result: HLA-DPB2\*03:01:01:01 bam coverage **■** 35 23 variants Alignment (reference: reconstructed gene haplotype 1) 0.0kb 2.5kb 5.0kb 7.5kb 10.0kb 12.5kb 15.0kb 17.5kb HLA-DPB2\*03:01:01:01 (identity: 99.92%)

**Locus: HLA-DQA1** 

Resolution: 4th field

Full typing result:

HLA-DQA1\*01:02:01:03

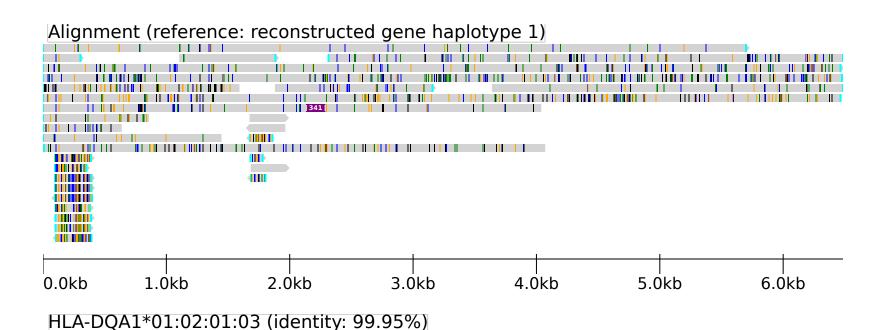
All Inc.

bam coverage



variants





**Locus: HLA-DQA2** 

Resolution: 4th field

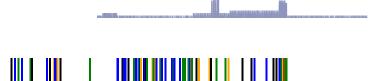
Full typing result:

HLA-DQA2\*01:01:01:01

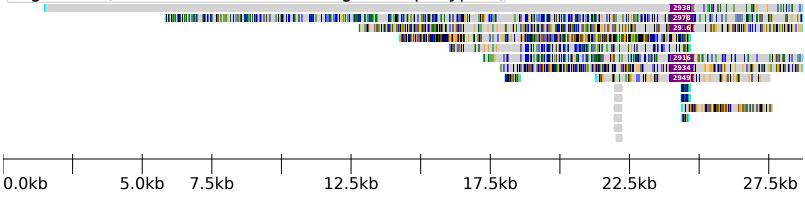
bam coverage

**□** 8 12

variants



Alignment (reference: reconstructed gene haplotype 2)



HLA-DQA2\*01:01:01:01 (identity: 99.98%)

**Locus: HLA-DQA2** 

Resolution: 4th field

Full typing result:

HLA-DQA2\*01:01:02:01

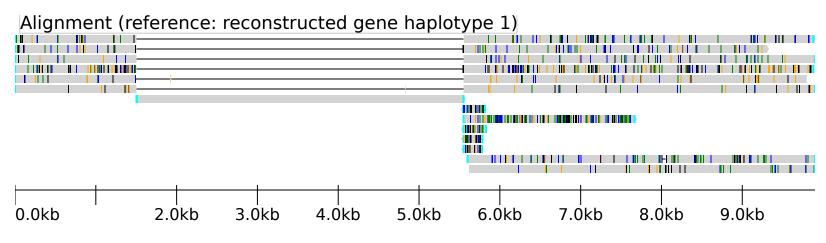
bam coverage

L 8 8

variants







HLA-DQA2\*01:01:02:01 (identity: 30.90%)

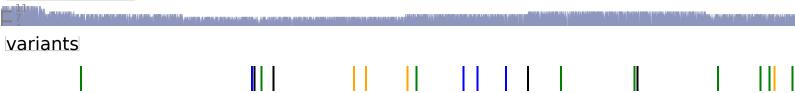
**Locus: HLA-DQB1** 

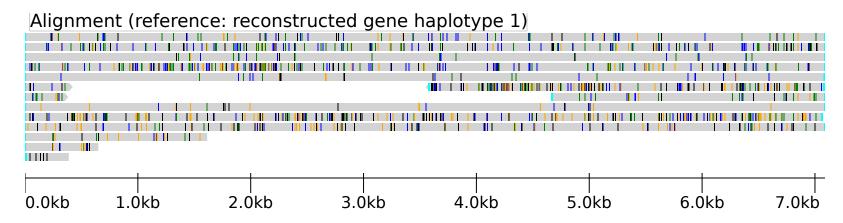
Resolution: 4th field

Full typing result:

HLA-DQB1\*05:02:01:08







HLA-DQB1\*05:02:01:08 (identity: 100.00%)

**Locus: HLA-DQB1** 

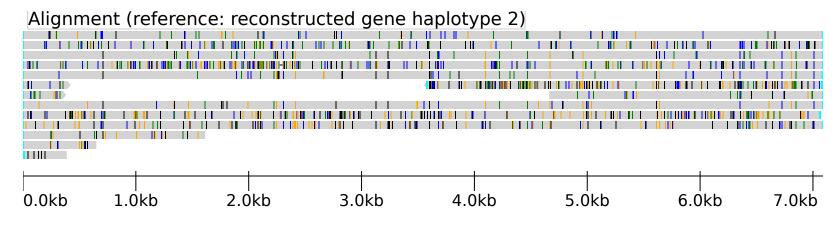
Resolution: 4th field

Full typing result:

HLA-DQB1\*05:01:01:03







HLA-DQB1\*05:01:01:03 (identity: 99.94%)

**Locus: HLA-DQB2** 

Resolution: 4th field

Full typing result:

HLA-DQB2\*01:02:02:01



variants

Alignment (reference: reconstructed gene haplotype 1)

0.0kb 1.0kb 2.0kb 3.0kb 4.0kb 5.0kb 6.0kb 7.0kb

HLA-DQB2\*01:02:02:01 (identity: 99.96%)

**Locus: HLA-DQB2** 

Resolution: 4th field

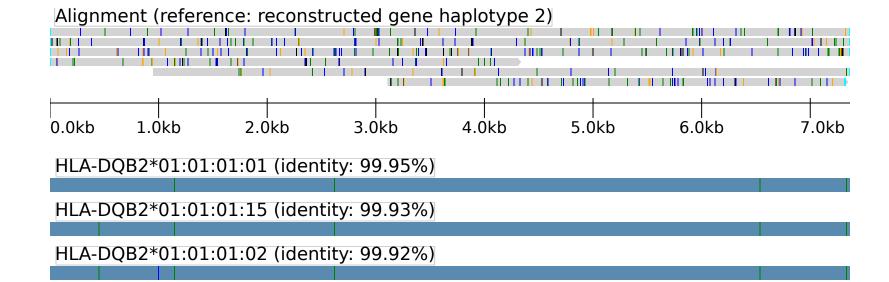
Full typing result:

HLA-DQB2\*01:01:01 | HLA-DQB2\*01:01:01:15 | HLA-DQB2\*01:01:02

bam coverage

Vorionto

variants



**Locus: HLA-DRA** 

Resolution: 4th field

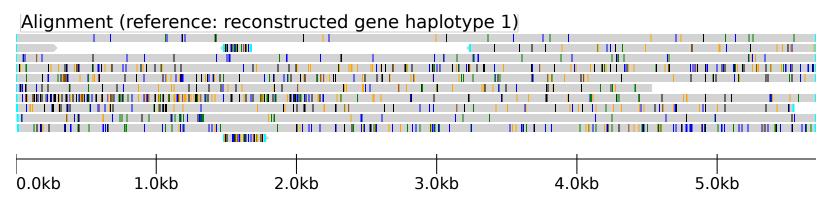
Full typing result:

HLA-DRA\*01:02:03:01

bam coverage

. . .

variants



HLA-DRA\*01:02:03:01 (identity: 99.98%)

**Locus: HLA-DRA** 

Resolution: 4th field

Full typing result:

HLA-DRA\*01:01:01:01

bam coverage

 $\mathbf{F}_{\frac{11}{6}}^{17}$ 

variants



Alignment (reference: reconstructed gene haplotype 2)

0.0kb 1.0kb 2.0kb 3.0kb 4.0kb 5.0kb 6.0kb

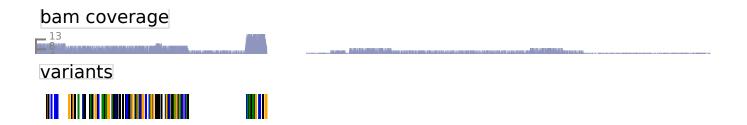
HLA-DRA\*01:01:01:01 (identity: 94.34%)

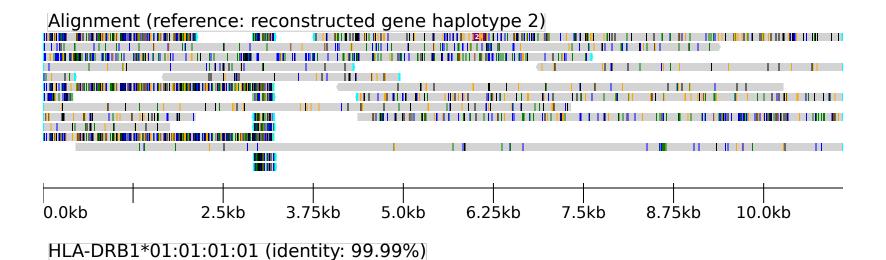
Locus: HLA-DRB1

Resolution: 4th field

Full typing result:

HLA-DRB1\*01:01:01:01





Locus: HLA-DRB1

Resolution: 4th field

#### Full typing result:

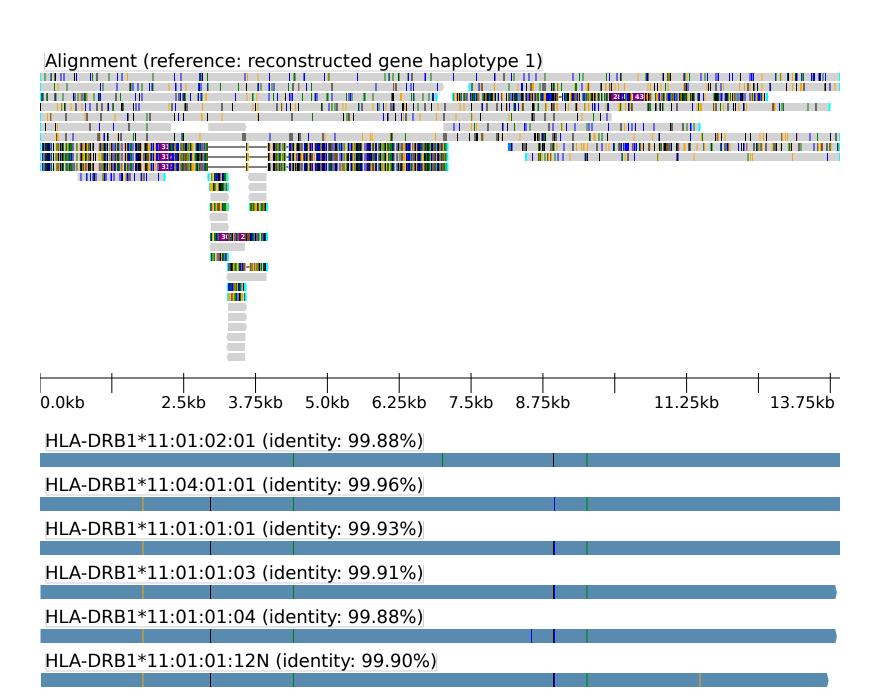
HLA-DRB1\*11:01:02:01 | HLA-DRB1\*11:04:01:01 | HLA-DRB1\*11:01:01:01

HLA-DRB1\*11:01:01:03 | HLA-DRB1\*11:01:01:04 | HLA-DRB1\*11:01:01:12N

#### bam coverage

variants





Locus: HLA-DRB3

Resolution: 4th field

### Full typing result:

HLA-DRB3\*02:02:01:02

### bam coverage

**□** 8 8

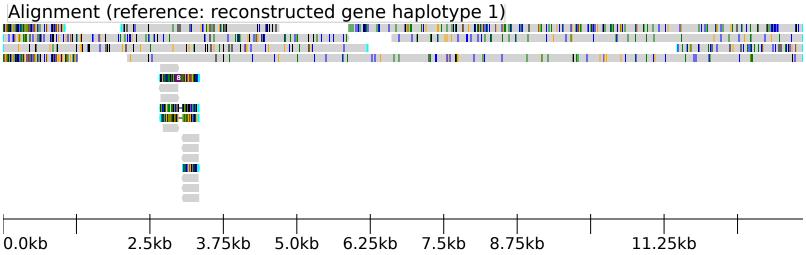


variants









HLA-DRB3\*02:02:01:02 (identity: 99.99%)

Locus: HLA-DRB4

Resolution: 4th field

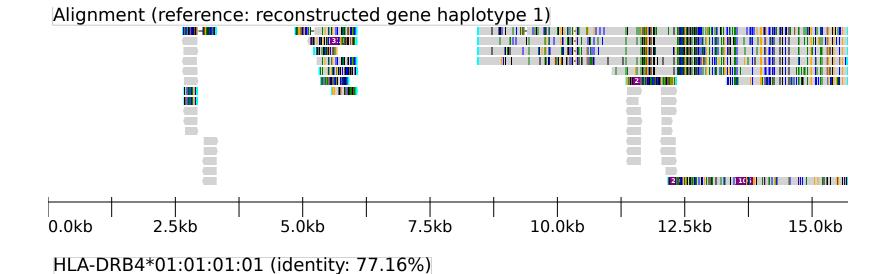
### Full typing result:

HLA-DRB4\*01:01:01:01 | HLA-DRB4\*02:01N | HLA-DRB4\*03:01N

HLA-DRB4\*02:01N (identity: 77.08%)

HLA-DRB4\*03:01N (identity: 80.49%)





**Locus: HLA-DRB5** 

Resolution: 4th field

Full typing result:

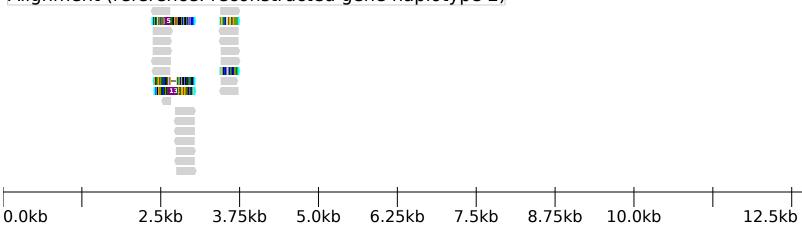
HLA-DRB5\*01:08:01N

bam coverage

F 6

variants

Alignment (reference: reconstructed gene haplotype 2)



HLA-DRB5\*01:08:01N (identity: 70.36%)

Sample: NA19127 **Locus: HLA-DRB5** Resolution: 4th field Full typing result: HLA-DRB5\*01:02:01 bam coverage **□** 17 11 variants Alignment (reference: reconstructed gene haplotype 1) 0.0kb 7.5kb 2.5kb 3.75kb 5.0kb 6.25kb 8.75kb 10.0kb 12.5kb

HLA-DRB5\*01:02:01 (identity: 74.80%)

**Locus: HLA-E** 

Resolution: 4th field

#### Full typing result:

HLA-E*01:03:01:01	HLA-E*01:01:01 HLA-E*01:03:01:02
HLA-E*01:03:01:14	HLA-E*01:03:01:15 HLA-E*01:03:02:01
HLA-E*01:03:01:04 HLA-E*01:03:38 HLA-E*01:03:41	
HLA-E*01:11 HLA-E*01:138 HLA-E*01:145	
HLA-E*01:147	

#### bam coverage

variants

 $\| \| \|$ 

Alignment (reference: reconstructed gene haplotype 1) | | | | | | 0.0kb 1.0kb 2.0kb 3.0kb

HLA-E\*01:03:01:01 (identity: 99.95%)

HLA-E\*01:01:01:01 (identity: 99.92%)

HLA-E\*01:03:01:02 (identity: 99.92%)

HLA-E\*01:03:01:14 (identity: 99.92%)

HLA-E\*01:03:01:15 (identity: 99.92%)

HLA-E\*01:03:02:01 (identity: 99.92%)

HLA-E\*01:03:01:04 (identity: 99.92%)

HLA-E\*01:03:38 (identity: 99.92%)

....

HLA-E\*01:03:41 (identity: 99.92%)

HLA-E\*01:11 (identity: 99.92%)

**Locus: HLA-F** 

Resolution: 4th field

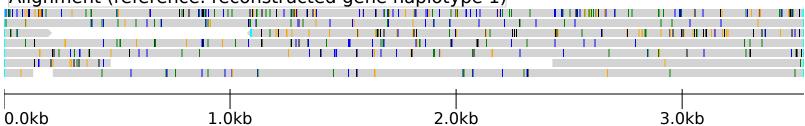
Full typing result:

HLA-F\*01:01:02:11

bam coverage

variants

Alignment (reference: reconstructed gene haplotype 1)



HLA-F\*01:01:02:11 (identity: 99.94%)

Locus: HLA-G

Resolution: 4th field

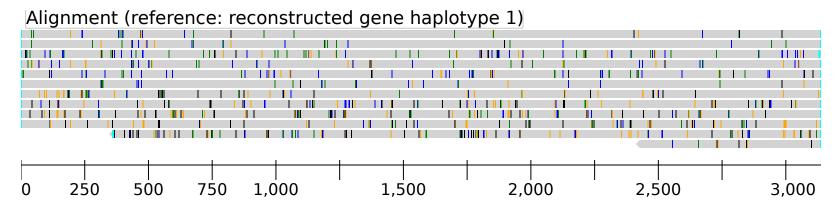
Full typing result:

HLA-G\*01:03:01:02

bam coverage

\_\_ 11

variants



HLA-G\*01:03:01:02 (identity: 100.00%)

**Locus: HLA-H** 

Resolution: 4th field

Full typing result:

HLA-H\*01:03:01:02

bam coverage

variants

Alignment (reference: reconstructed gene haplotype 1)

0.0kb 1.0kb 2.0kb 3.0kb

HLA-H\*01:03:01:02 (identity: 100.00%)

Locus: HLA-H

Resolution: 4th field

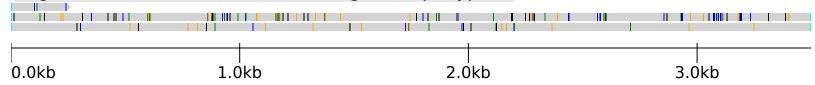
#### Full typing result:

HLA-H\*01:03:01:01

bam coverage

variants

Alignment (reference: reconstructed gene haplotype 2)



HLA-H\*01:03:01:01 (identity: 100.00%)

**Locus: HLA-J** 

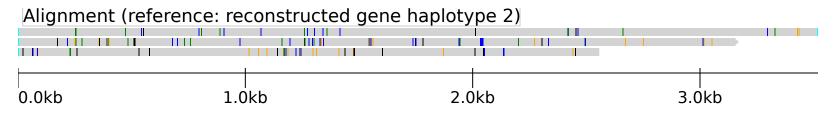
Resolution: 4th field

#### Full typing result:

HLA-J\*01:01:01:16

#### bam coverage

variants



HLA-J\*01:01:16 (identity: 100.00%)

Locus: HLA-J

Resolution: 4th field

Full typing result:

HLA-J\*01:01:14 HLA-J\*01:01:15

bam coverage

variants |

Alignment (reference: reconstructed gene haplotype 1)

0.0kb 1.0kb 2.0kb 3.0kb

HLA-J\*01:01:14 (identity: 100.00%)

HLA-J\*01:01:01:15 (identity: 99.97%)

**Locus: HLA-K** 

Resolution: 4th field

#### Full typing result:

HLA-K\*01:02

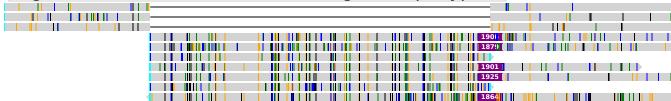
#### bam coverage

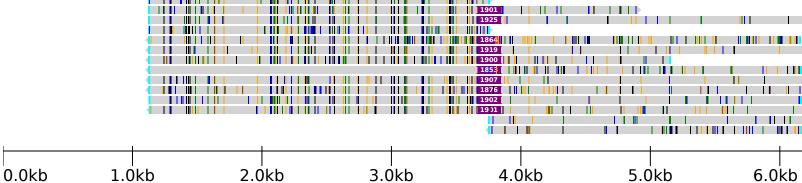
L 15

variants



Alignment (reference: reconstructed gene haplotype 1)





HLA-K\*01:02 (identity: 26.08%)

**Locus: HLA-L** 

Resolution: 4th field

#### Full typing result:

HLA-L\*01:03

## bam coverage

variants

HLA-L\*01:03 (identity: 99.89%)

Locus: HLA-L

Resolution: 4th field

Full typing result:

HLA-L\*01:01:01:01

bam coverage

variants

HLA-L\*01:01:01 (identity: 99.92%)

**Locus: HLA-P** 

Resolution: 4th field

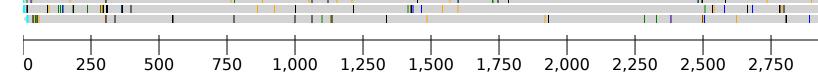
Full typing result:

HLA-P\*02:01:01:01

bam coverage

variants

Alignment (reference: reconstructed gene haplotype 1)



HLA-P\*02:01:01:01 (identity: 98.19%)

**Locus: HLA-T** 

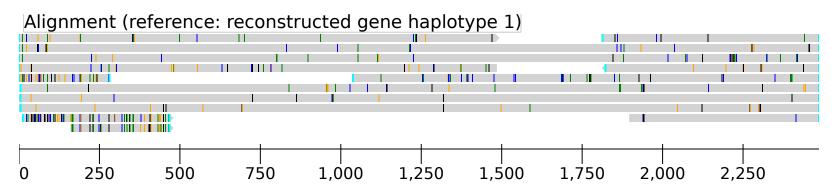
Resolution: 4th field

Full typing result:

HLA-T\*01:01:01:02

bam coverage

variants



HLA-T\*01:01:01:02 (identity: 99.92%)

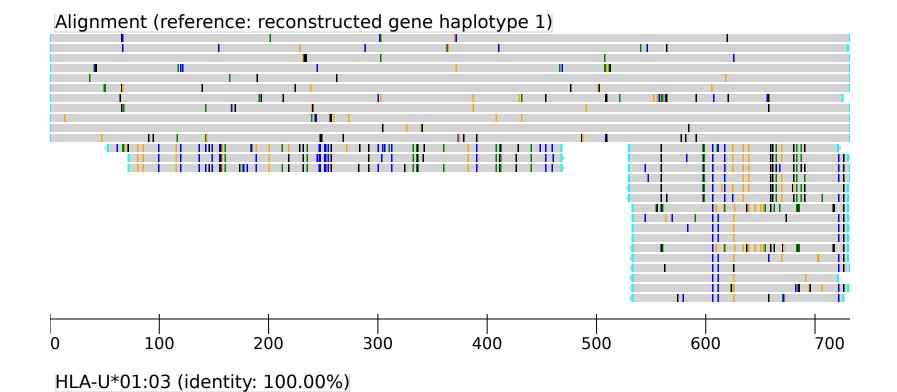
**Locus: HLA-U** 

Resolution: 4th field

Full typing result:

HLA-U\*01:03





**Locus: HLA-W** 

Resolution: 4th field

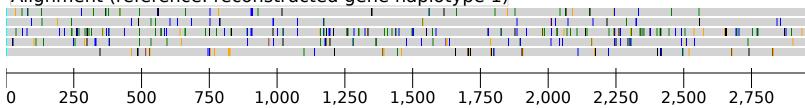
Full typing result:

HLA-W\*03:01:01:01 HLA-W\*03:01:01:02

bam coverage

variants

Alignment (reference: reconstructed gene haplotype 1)



HLA-W\*03:01:01:01 (identity: 99.01%)

HLA-W\*03:01:01:02 (identity: 98.98%)

## Locus: MICA Resolution: 4th field Full typing result: MICA\*018:01:01 MICA\*018:01:04 bam coverage **□** 62 41 variants Alignment (reference: reconstructed gene haplotype 1) 20 12: Ш П П Н 14 Ш 0.0kb 20.0kb 10.0kb 30.0kb MICA\*018:01:01 (identity: 99.98%) MICA\*018:01:04 (identity: 99.97%)

Sample: NA19127

Resolution: 4th field Full typing result: MICA\*002:01:03 MICA\*002:01:01 MICA\*002:01:07 MICA\*041 bam coverage variants Alignment (reference: reconstructed gene haplotype 2) 26 18 11 18 Ш Ш ш Ī Ш Ī 16; Ī 18 Ï ı Ш 14 П П Ī Ш Ш 0.0kb 20.0kb 10.0kb 30.0kb MICA\*002:01:07 (identity: 99.00%) 82 MICA\*002:01:03 (identity: 98.98%) 82 MICA\*002:01:01 (identity: 99.00%) 82 MICA\*041 (identity: 98.99%)

Sample: NA19127

Locus: MICA

Locus: MICB Resolution: 4th field Full typing result: MICB\*052 bam coverage **□** 116 777 variants Alignment (reference: reconstructed gene haplotype 1) Alignment (reference: reconstructed gene naplotype 1) Ī III 4 0.0kb 2.5kb 3.75kb 5.0kb 6.25kb 7.5kb 8.75kb 12.5kb 10.0kb MICB\*052 (identity: 99.89%)

Sample: NA19127

**Locus: TAP1** 

Resolution: 4th field

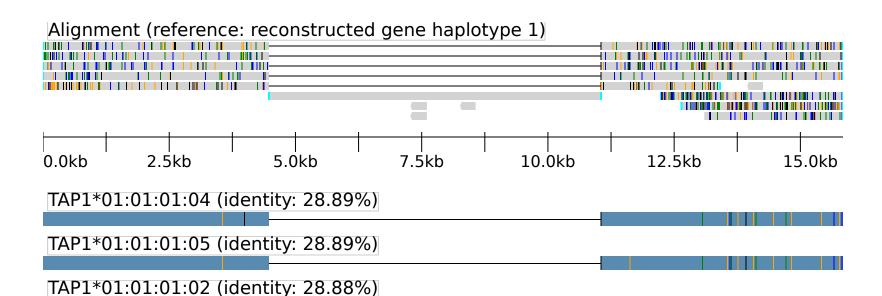
#### Full typing result:

TAP1\*01:01:04 TAP1\*01:01:05 TAP1\*01:01:02

bam coverage

variants





**Locus: TAP1** 

Resolution: 4th field

#### Full typing result:

TAP1\*01:01:01:01



variants

Alignment (reference: reconstructed gene haplotype 2)



TAP1\*01:01:01:01 (identity: 28.33%)

**Locus: TAP2** 

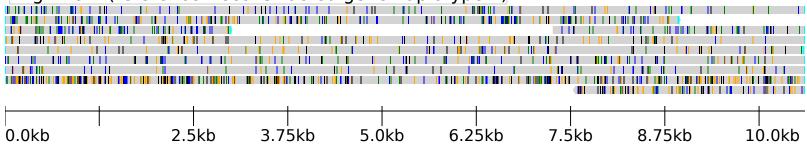
Resolution: 4th field

Full typing result:

bam coverage

variants

Alignment (reference: reconstructed gene haplotype 1)



TAP2\*01:01:03:02 (identity: 99.92%)

TAP2\*01:01:03:03 (identity: 99.91%)

TAP2\*01:01:03:01 (identity: 99.88%)

**Locus: TAP2** 

Resolution: 4th field

#### Full typing result:

bam coverage

variants

Alignment (reference: reconstructed gene haplotype 2)

0.0kb 2.5kb 3.75kb 5.0kb 6.25kb 7.5kb 8.75kb 10.0kb

TAP2\*01:01:03:01 (identity: 99.90%)

TAP2\*01:01:03:02 (identity: 99.88%)

TAP2\*01:01:03:03 (identity: 99.87%)