Locus: HLA-A

Resolution: 4th field

Full typing result:

HLA-A*36:01:01:01

bam coverage

variants

HLA-A*36:01:01:01 (identity: 100.00%)

Locus: HLA-A

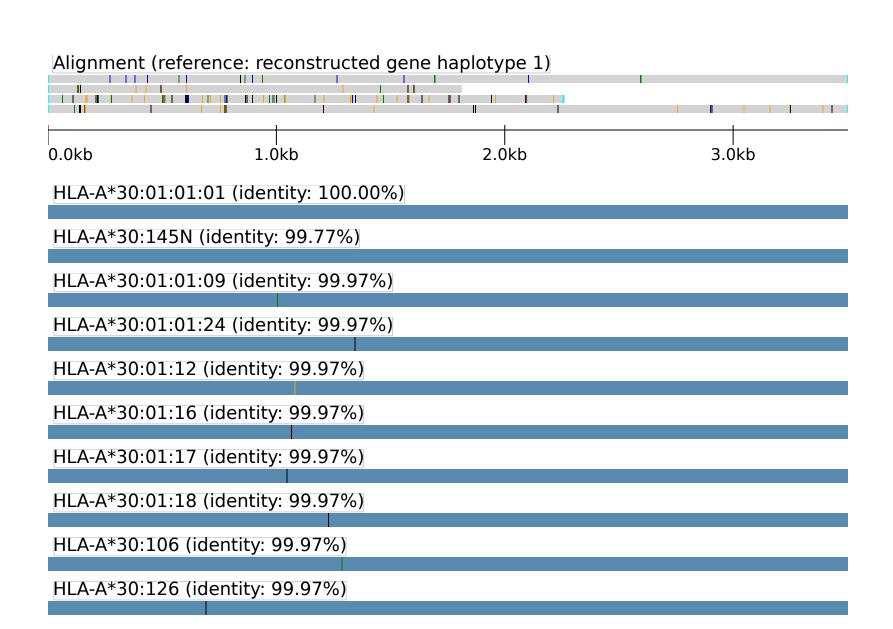
Resolution: 4th field

Full typing result:

HLA-A*30:01:01:01	HLA-A*30:	145N	HLA-A*30:01:01:09
HLA-A*30:01:01:24	HLA-A*30:	01:12	HLA-A*30:01:16
HLA-A*30:01:17	LA-A*30:01:	18 H	LA-A*30:106
HLA-A*30:126 HLA	\-A*30:134	HLA-A	*30:138
HLA-A*30:143 HLA	A-A*30:157	HLA-A	*30:165

bam coverage

variants



Locus: HLA-B

Resolution: 4th field

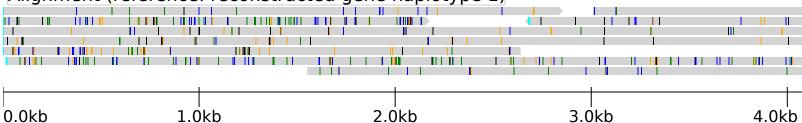
Full typing result:

HLA-B*42:01:01:01

bam coverage

variants

Alignment (reference: reconstructed gene haplotype 1)



HLA-B*42:01:01:01 (identity: 99.98%)

Locus: HLA-C

Resolution: 4th field

Full typing result:

HLA-C*12:03:01:01 HLA-C*12:03:01:63 HLA-C*12:03:01:64

HLA-C*12:13:01:02 HLA-C*12:23 HLA-C*12:34

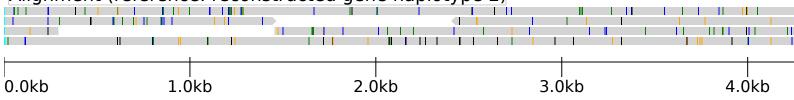
HLA-C*12:03:67 HLA-C*12:380 HLA-C*12:03:01:44

HLA-C*12:330Q

bam coverage

variants

Alignment (reference: reconstructed gene haplotype 2)



HLA-C*12:03:01:01 (identity: 100.00%)

HLA-C*12:03:01:63 (identity: 99.98%)

HLA-C*12:03:01:64 (identity: 99.98%)

HLA-C*12:13:01:02 (identity: 99.98%)

HLA-C*12:23 (identity: 99.98%)

HLA-C*12:34 (identity: 99.98%)

HLA-C*12:03:67 (identity: 99.98%)

HLA-C*12:380 (identity: 99.98%)

HLA-C*12:03:01:44 (identity: 99.98%)

HLA-C*12:330Q (identity: 99.98%)

Locus: HLA-C

Resolution: 4th field

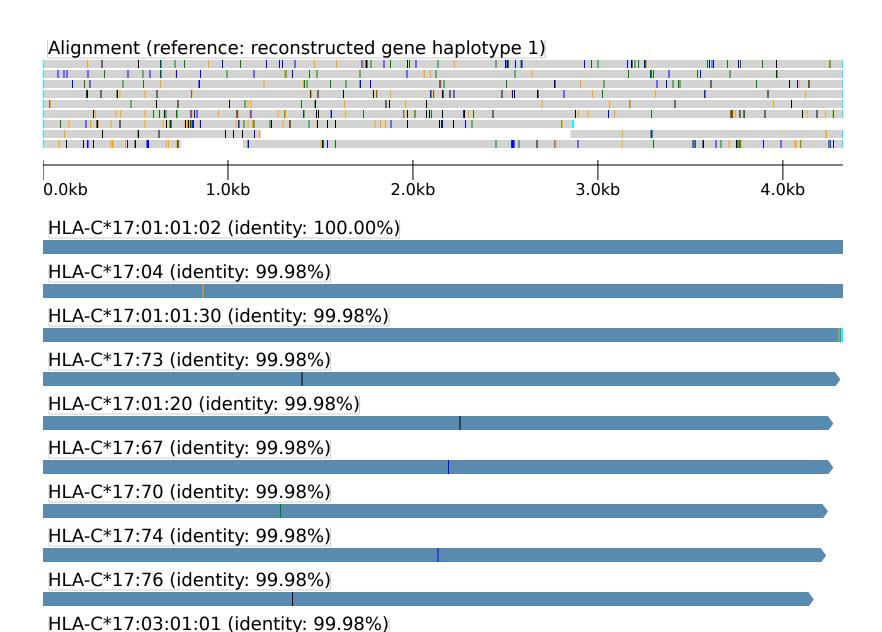
Full typing result:

HLA-C*17:01:01:02 HLA-C*17:04 HLA-C*17:01:30
HLA-C*17:73 HLA-C*17:01:20 HLA-C*17:67
HLA-C*17:70 HLA-C*17:74 HLA-C*17:76

HLA-C*17:03:01:01

bam coverage

variants



Sample: NA19818 Locus: HLA-DMA Resolution: 4th field Full typing result: HLA-DMA*01:01:01:02 bam coverage **□** 34 23 variants Alignment (reference: reconstructed gene haplotype 1) 1(

0.0kb 2.5kb 5.0kb 7.5kb 10.0kb 12.5kb 15.0kb 17.5kb

HLA-DMA*01:01:01:02 (identity: 100.00%)

Locus: HLA-DMB

Resolution: 4th field

Full typing result:

HLA-DMB*01:01:01:02

bam coverage

variants

Alignment (reference: reconstructed gene haplotype 1)

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

HLA-DMB*01:01:01:02 (identity: 100.00%)

Locus: HLA-DMB

Resolution: 4th field

Full typing result:

HLA-DMB*01:03:01:03

bam coverage

variants

Alignment (reference: reconstructed gene haplotype 2)

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

HLA-DMB*01:03:01:03 (identity: 100.00%)

Locus: HLA-DOA

Resolution: 4th field

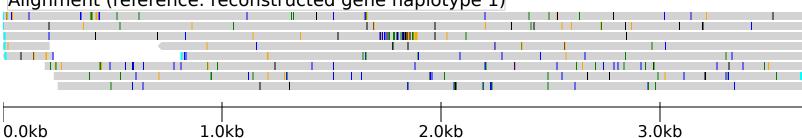
Full typing result:

HLA-DOA*01:01:04:03 | HLA-DOA*01:01:04:05 | HLA-DOA*01:01:08

bam coverage

variants

Alignment (reference: reconstructed gene haplotype 1)



HLA-DOA*01:01:04:03 (identity: 100.00%)

HLA-DOA*01:01:04:05 (identity: 99.97%)

HLA-DOA*01:01:08 (identity: 99.97%)

Locus: HLA-DOB

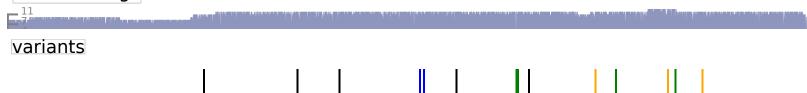
Resolution: 4th field

Full typing result:

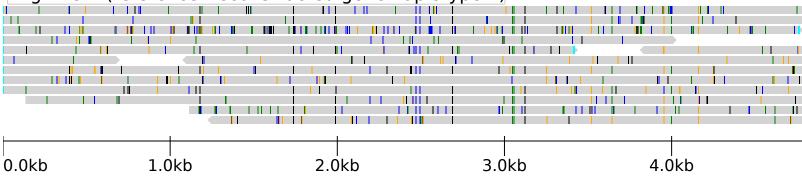
HLA-DOB*01:01:04 | HLA-DOB*01:01:03:02 | HLA-DOB*01:05

HLA-DOB*01:01:03:09

bam coverage







HLA-DOB*01:01:01:04 (identity: 99.73%)

HLA-DOB*01:01:03:02 (identity: 99.73%)

HLA-DOB*01:05 (identity: 99.71%)

HLA-DOB*01:01:03:09 (identity: 99.70%)

Locus: HLA-DOB

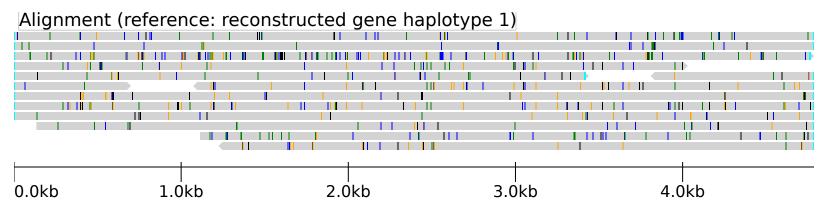
Resolution: 4th field

Full typing result:

HLA-DOB*01:05 | HLA-DOB*01:01:04

bam coverage





HLA-DOB*01:05 (identity: 99.96%)

HLA-DOB*01:01:01:04 (identity: 99.94%)

Locus: HLA-DPA1

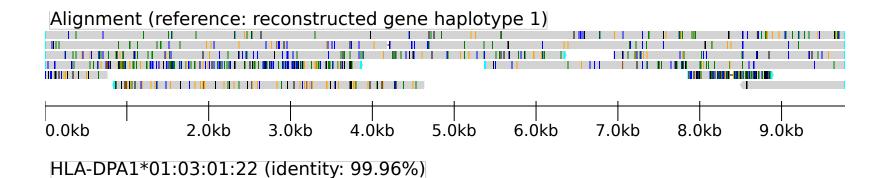
Resolution: 4th field

Full typing result:

HLA-DPA1*01:03:01:22

bam coverage

variants



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 2)

0.0kb 2.0kb 3.0kb 4.0kb 5.0kb 6.0kb 7.0kb 8.0kb 9.0kb

HLA-DPA1*02:01:08:03 (identity: 99.97%)

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

HLA-DPA1*02:01:02:03 (identity: 99.95%)

HLA-DPA1*02:26:01:01 (identity: 99.95%)

HLA-DPA1*02:84 (identity: 99.94%)

Locus: HLA-DPA2

Resolution: 4th field

Full typing result:

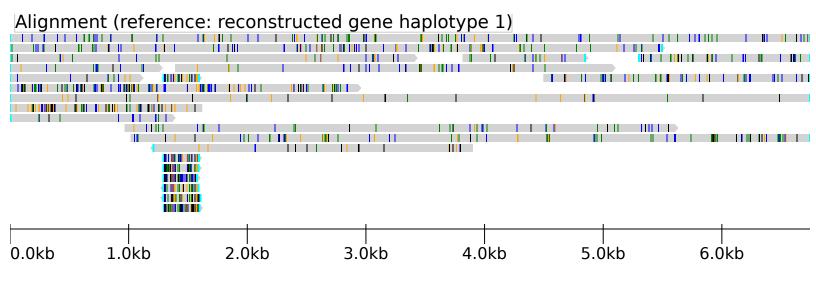
HLA-DPA2*01:01:01:03

bam coverage

__ 15 __ 10

variants





HLA-DPA2*01:01:01:03 (identity: 99.97%)

Locus: HLA-DPB1

Resolution: 4th field

Full typing result:

```
      HLA-DPB1*02:01:19:01
      HLA-DPB1*02:01:02:26
      HLA-DPB1*02:01:19:02

      HLA-DPB1*02:01:22
      HLA-DPB1*1344:01:02
      HLA-DPB1*02:01:02:03

      HLA-DPB1*02:01:02:46Q
      HLA-DPB1*1369:01
      HLA-DPB1*02:01:02:28

      HLA-DPB1*02:01:02:50
      HLA-DPB1*02:01:02:86
      HLA-DPB1*02:01:15

      HLA-DPB1*02:01:19:03
      HLA-DPB1*47:01:01:03
      HLA-DPB1*81:01:01:02
```

bam coverage

variants

HLA-DPB1*02:01:02:26 (identity: 99.97%)

HLA-DPB1*02:01:19:02 (identity: 99.97%)

HLA-DPB1*02:01:22 (identity: 99.97%)

HLA-DPB1*1344:01:02 (identity: 99.97%)

HLA-DPB1*02:01:02:03 (identity: 99.96%)

HLA-DPB1*02:01:02:46Q (identity: 99.96%)

HLA-DPB1*1369:01 (identity: 99.96%)

HLA-DPB1*02:01:02:28 (identity: 99.92%)

HLA-DPB1*02:01:02:50 (identity: 99.95%)

Locus: HLA-DPB1

Resolution: 4th field

Full typing result:

HLA-DPB1*17:01:01 HLA-DPB1*1233:01 HLA-DPB1*1367:01

HLA-DPB1*1394:01 HLA-DPB1*1397:01 HLA-DPB1*1555:01

HLA-DPB1*1556:01 HLA-DPB1*17:01:01:03 HLA-DPB1*17:01:01:04

HLA-DPB1*17:01:01:05 HLA-DPB1*17:01:01:07 HLA-DPB1*17:01:01:08

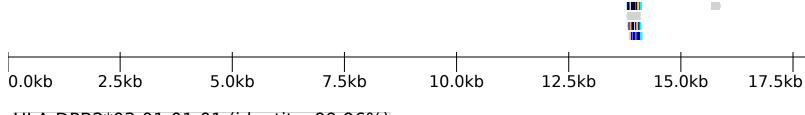
HLA-DPB1*17:01:01:05 (identity: 99.98%)

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 HLA-DPB1*17:01:01:01 (identity: 99.99%) HLA-DPB1*1233:01 (identity: 99.98%) HLA-DPB1*1367:01 (identity: 99.98%) HLA-DPB1*1394:01 (identity: 99.98%) HLA-DPB1*1397:01 (identity: 99.98%) HLA-DPB1*1555:01 (identity: 99.98%) HLA-DPB1*1556:01 (identity: 99.98%) HLA-DPB1*17:01:01:03 (identity: 99.98%) HLA-DPB1*17:01:01:04 (identity: 99.98%)

Sample: NA19818 **Locus: HLA-DPB2** Resolution: 4th field Full typing result: HLA-DPB2*03:01:01:01 bam coverage **□** 34 23 variants Alignment (reference: reconstructed gene haplotype 1) **Till I**ndia in the state of th П ш Ш Ш



HLA-DPB2*03:01:01:01 (identity: 99.96%)

Locus: HLA-DQA1 Resolution: 4th field Full typing result: HLA-DQA1*05:05:01:09 | HLA-DQA1*05:05:01:02 | HLA-DQA1*05:05:01:01 HLA-DQA1*05:11:01:01 | HLA-DQA1*05:05:01:39 | HLA-DQA1*05:05:01:10 HLA-DQA1*05:09:01:04 bam coverage **■** 46 30 variants Alignment (reference: reconstructed gene haplotype 1) <mark>i paranani na iiri parani arang maranan ii ang parani na maranani in ang in ani ini an ang mari ini ini ani ani</mark> 40000 0.0kb 1.0kb 2.0kb 3.0kb 4.0kb 5.0kb 6.0kb HLA-DQA1*05:05:01:09 (identity: 99.98%) HLA-DQA1*05:05:01:02 (identity: 99.86%) HLA-DQA1*05:05:01:01 (identity: 99.92%) HLA-DQA1*05:11:01:01 (identity: 99.97%) HLA-DQA1*05:05:01:39 (identity: 99.97%) HLA-DQA1*05:05:01:10 (identity: 99.91%) HLA-DQA1*05:09:01:04 (identity: 99.95%)

Sample: NA19818

Locus: HLA-DQA2

Resolution: 4th field

Full typing result:

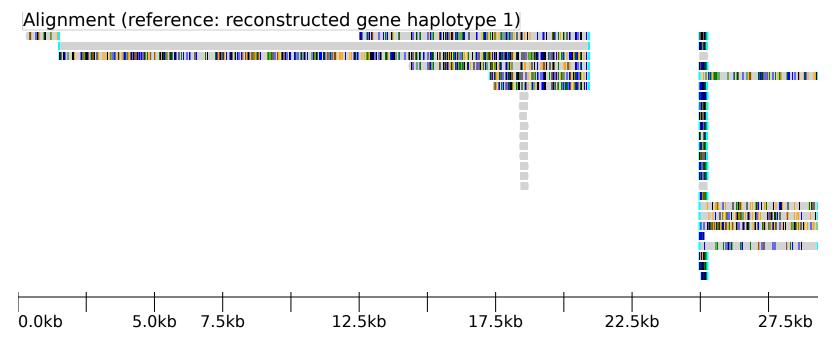
HLA-DQA2*01:01:02:01

bam coverage

22 15

variants





HLA-DQA2*01:01:02:01 (identity: 100.00%)

Locus: HLA-DQB1

Resolution: 4th field

Full typing result:

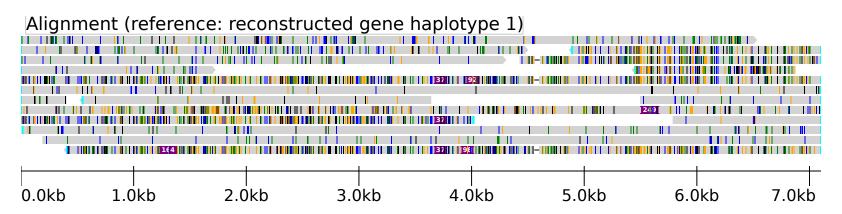
HLA-DQB1*06:09:01:01

bam coverage

variants







HLA-DQB1*06:09:01:01 (identity: 100.00%)

Locus: HLA-DQB1

Resolution: 4th field

Full typing result:

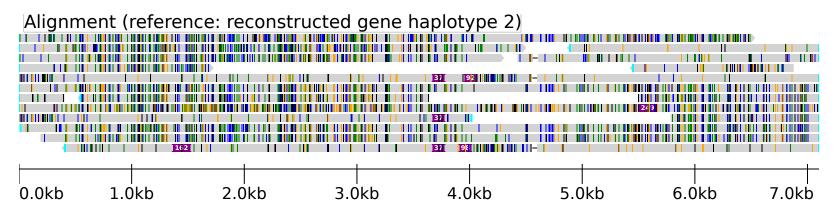
HLA-DQB1*03:431

bam coverage

variants







HLA-DQB1*03:431 (identity: 95.46%)

Locus: HLA-DQB2

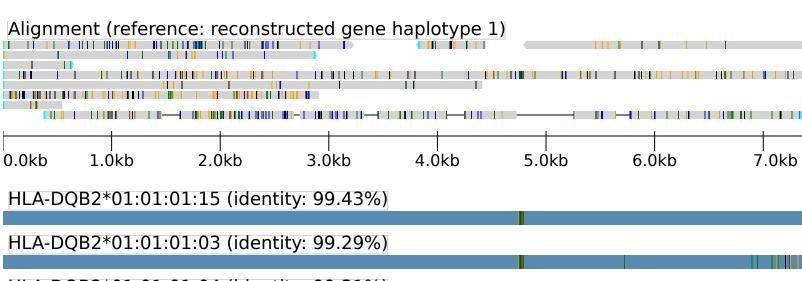
Resolution: 4th field

Full typing result:

HLA-DQB2*01:01:01:15 HLA-DQB2*01:01:03 HLA-DQB2*01:01:04 HLA-DQB2*01:01:06 HLA-DQB2*01:05 HLA-DQB2*01:03

bam coverage

variants



HLA-DQB2*01:01:01:04 (identity: 99.31%)

HLA-DQB2*01:01:01:06 (identity: 99.41%)

HLA-DQB2*01:05 (identity: 99.39%)

HLA-DQB2*01:03 (identity: 99.39%)

Locus: HLA-DQB2

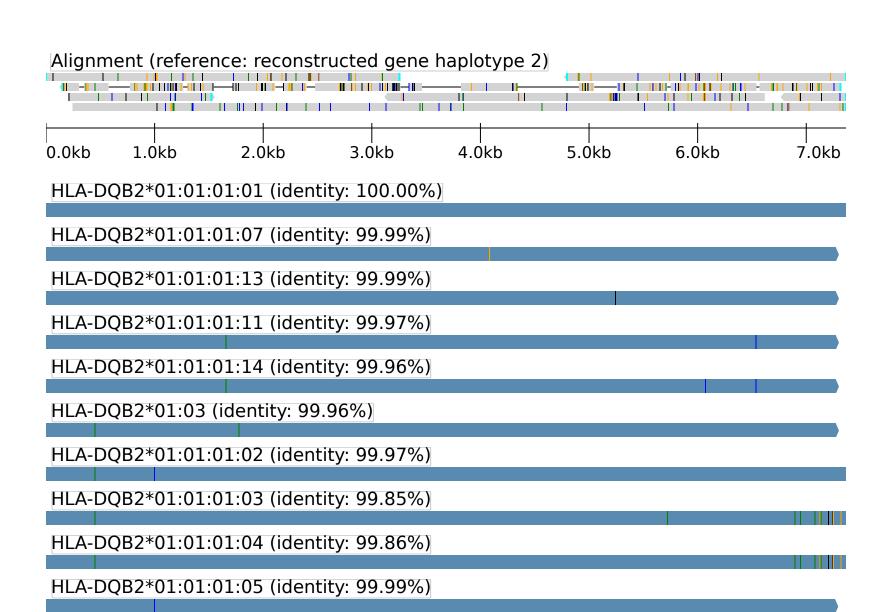
Resolution: 4th field

Full typing result:

HLA-DQB2*01:01:01:01	HLA-DQB2*01:01:01:07	HLA-DQB2*01:01:01:13
HLA-DQB2*01:01:01:11	HLA-DQB2*01:01:01:14	HLA-DQB2*01:03
HLA-DQB2*01:01:01:02	HLA-DQB2*01:01:01:03	HLA-DQB2*01:01:01:04
HLA-DQB2*01:01:01:05	HLA-DQB2*01:01:01:06	HLA-DQB2*01:01:01:08
HLA-DQB2*01:01:01:09	HLA-DQB2*01:01:01:10	HLA-DQB2*01:01:01:12
HLA-DQB2*01:01:01:16	HLA-DQB2*01:01:01:17	HLA-DQB2*01:01:01:18
HLA-DQB2*01:01:03 HI	A-DQB2*01:02:01:01 HI	LA-DQB2*01:02:01:02
112 DQD2 02102103	TA DQDE OTIONION	EA DQDE GIGEIGIGE
HLA-DQB2*01:02:01:03	HLA-DQB2*01:02:01:04	HLA-DQB2*01:02:02:01
11LA-DQD2 01.02.01.03	11LA-DQB2 01.02.01.04	11LA-DQD2 01.02.02.01
HLA-DQB2*01:02:02:02		
ПLA-DQD2"U1:U2:U2:U2		

bam coverage

variants



Locus: HLA-DRA

Resolution: 4th field

Full typing result:

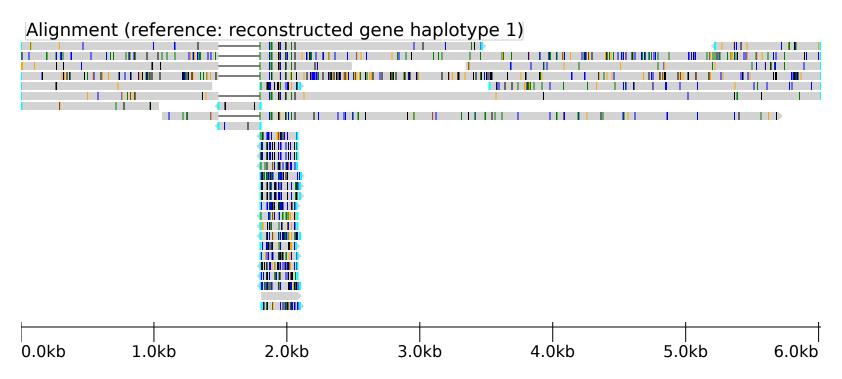
HLA-DRA*01:02:02:03

bam coverage

□ 22 15

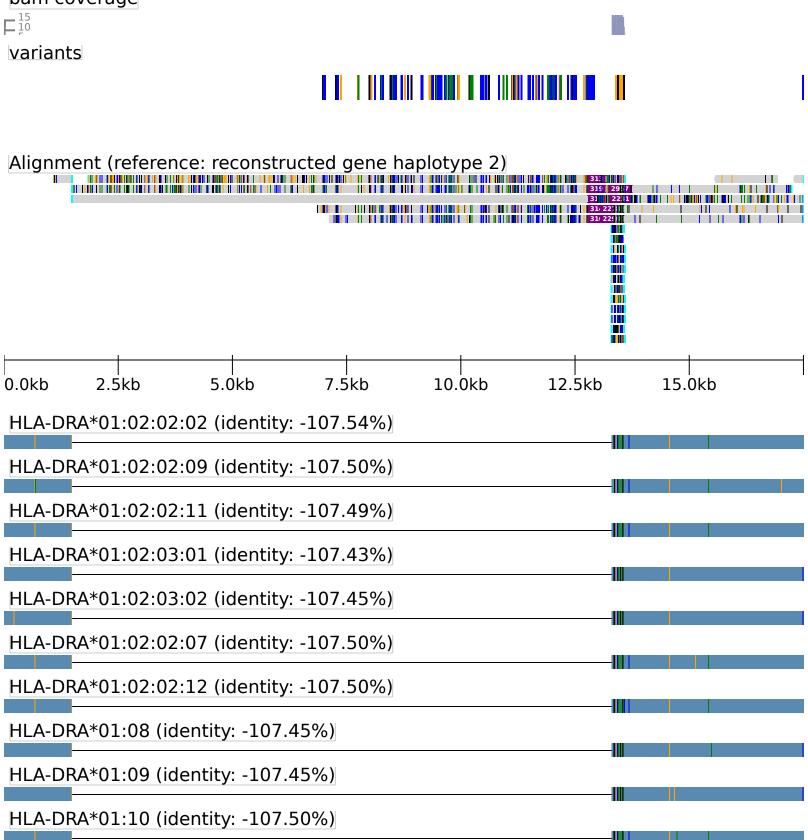
variants





HLA-DRA*01:02:02:03 (identity: 94.27%)

Sample: NA19818 Locus: HLA-DRA Resolution: 4th field Full typing result: HLA-DRA*01:02:02:02 | HLA-DRA*01:02:02:09 | HLA-DRA*01:02:02:11 HLA-DRA*01:02:03:01 | HLA-DRA*01:02:03:02 | HLA-DRA*01:02:02:07 HLA-DRA*01:02:02:12 | HLA-DRA*01:08 | HLA-DRA*01:09 HLA-DRA*01:10 bam coverage **□** 15 10 variants Alignment (reference: reconstructed gene haplotype 2)



Sample: NA19818 Locus: HLA-DRB1 Resolution: 4th field Full typing result: HLA-DRB1*09:01:02:03 | HLA-DRB1*09:59 | HLA-DRB1*09:01:02:10 HLA-DRB1*09:01:02:04 | HLA-DRB1*09:01:02:11 bam coverage **—** 37 25 variants Alignment (reference: reconstructed gene haplotype 2) 50 - | | | | 22 12.5kb 0.0kb 5.0kb 7.5kb 15.0kb 2.5kb 10.0kb HLA-DRB1*09:01:02:03 (identity: 89.36%) HLA-DRB1*09:59 (identity: 89.36%) HLA-DRB1*09:01:02:10 (identity: 89.30%) HLA-DRB1*09:01:02:04 (identity: 89.33%) HLA-DRB1*09:01:02:11 (identity: 89.33%)

Locus: HLA-DRB1

Resolution: 4th field

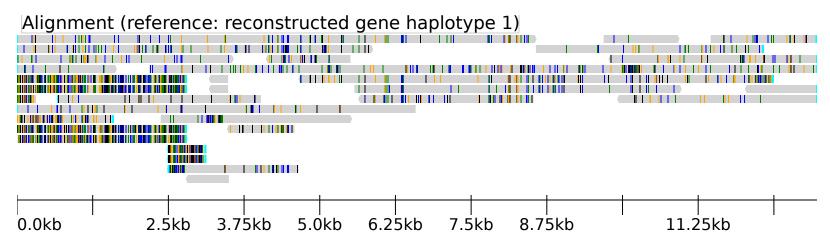
Full typing result:

HLA-DRB1*08:04:01:05

bam coverage

variants





HLA-DRB1*08:04:01:05 (identity: 99.88%)

Locus: HLA-DRB3

Resolution: 4th field

Full typing result:

HLA-DRB3*02:02:01:01



F 9 14

variants

Alignment (reference: reconstructed gene haplotype 1)



HLA-DRB3*02:02:01:01 (identity: -5.23%)

Locus: HLA-DRB4

Resolution: 4th field

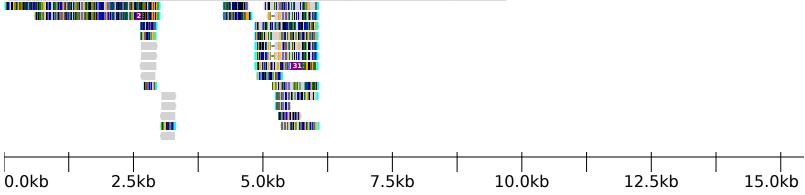
Full typing result:

HLA-DRB4*01:01:01 | HLA-DRB4*01:01:03 | HLA-DRB4*01:01:12 | HLA-DRB4*02:01N |

bam coverage

variants

Alignment (reference: reconstructed gene haplotype 1)



HLA-DRB4*01:01:01:01 (identity: 95.09%)

HLA-DRB4*01:01:01:03 (identity: 94.66%)

HLA-DRB4*01:01:12 (identity: 95.09%)

HLA-DRB4*02:01N (identity: 95.09%)

Locus: HLA-DRB4

Resolution: 4th field

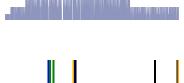
Full typing result:

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

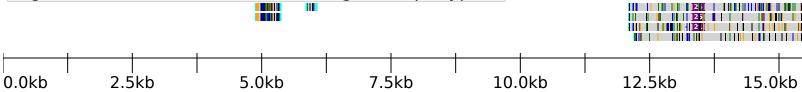
bam coverage

3

variants







HLA-DRB4*01:03:01:02N (identity: 94.56%)

Locus: HLA-DRB5

Resolution: 4th field

Full typing result:

HLA-DRB5*01:01:01:03 | HLA-DRB5*01:01:01:04

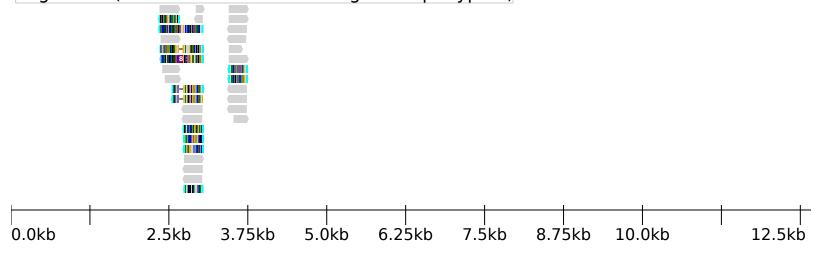
bam coverage

L 14 10

variants



Alignment (reference: reconstructed gene haplotype 2)



HLA-DRB5*01:01:01:03 (identity: 99.13%)

HLA-DRB5*01:01:01:04 (identity: 99.13%)

Locus: HLA-DRB5

Resolution: 4th field

Full typing result:

HLA-DRB5*01:01:01:01

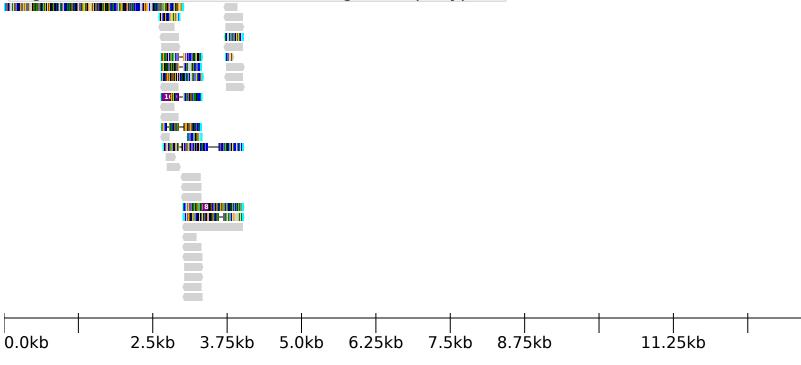
bam coverage

18 12

variants



Alignment (reference: reconstructed gene haplotype 1)



HLA-DRB5*01:01:01:01 (identity: 82.56%)

Sample: NA19818 Locus: HLA-E Resolution: 4th field

Full typing result:

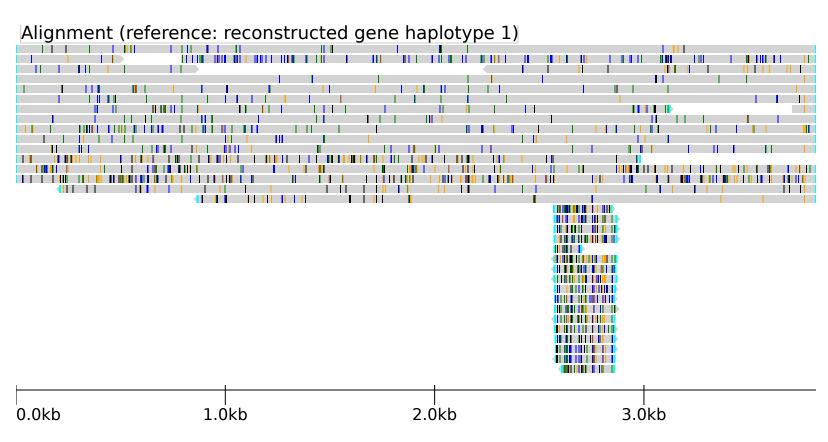
HLA-E*01:01:01:01

bam coverage

29

variants





HLA-E*01:01:01 (identity: 100.00%)

Locus: HLA-F

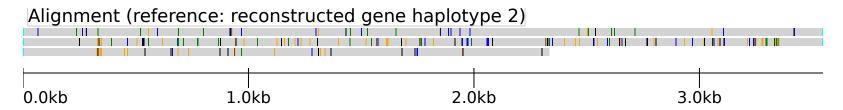
Resolution: 4th field

Full typing result:

HLA-F*01:03:01:03

bam coverage

variants



HLA-F*01:03:01:03 (identity: 100.00%)

Locus: HLA-F

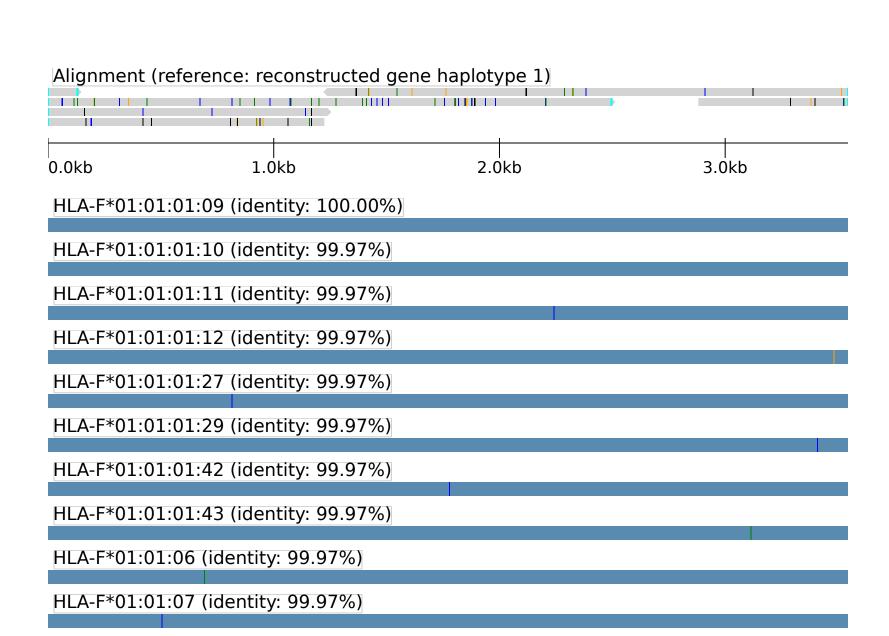
Resolution: 4th field

Full typing result:

HLA-F*01:01:01:09	HLA-F*01:01:01:10	HLA-F*01:01:01:11
HLA-F*01:01:01:12	HLA-F*01:01:01:27	HLA-F*01:01:01:29
HLA-F*01:01:01:42	HLA-F*01:01:01:43	HLA-F*01:01:06
HLA-F*01:01:07	LA-F*01:01:08	A-F*01:01:11
HLA-F*01:02:01:02	HLA-F*01:10 HL	A-F*01:12

bam coverage

variants



Locus: HLA-G

Resolution: 4th field

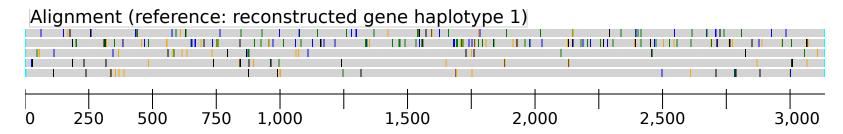
Full typing result:

HLA-G*01:05:01N

bam coverage

2 Me diamental adamental management in the mean of the mean of the mean of the mean and the mean of the first ment

variants



HLA-G*01:05:01N (identity: 100.00%)

Locus: HLA-H

Resolution: 4th field

Full typing result:

HLA-H*02:05:01:01

bam coverage

variants

HLA-H*02:05:01:01 (identity: 99.89%)

Locus: HLA-H

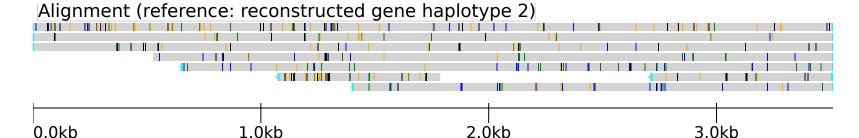
Resolution: 4th field

Full typing result:

HLA-H*02:10:01:02

bam coverage

variants



HLA-H*02:10:01:02 (identity: 100.00%)

Locus: HLA-J

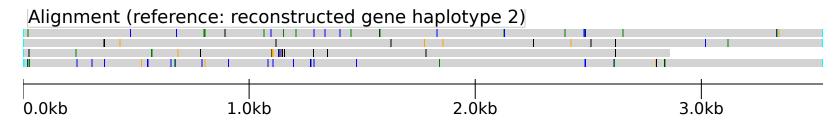
Resolution: 4th field

Full typing result:

HLA-J*01:01:01:10

bam coverage

variants



HLA-J*01:01:10 (identity: 100.00%)

Locus: HLA-J

Resolution: 4th field

Full typing result:

HLA-J*01:01:01:02

bam coverage

variants

0.0kb

Alignment (reference: reconstructed gene haplotype 1)

2.0kb

3.0kb

HLA-J*01:01:02 (identity: 100.00%)

1.0kb

Locus: HLA-K

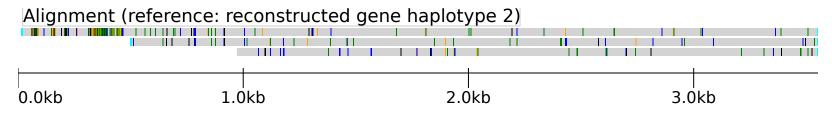
Resolution: 4th field

Full typing result:

HLA-K*01:01:01:01

bam coverage

 $\begin{bmatrix} 3 \\ 2 \\ 1 \end{bmatrix}$ variants



HLA-K*01:01:01:01 (identity: 93.27%)

Locus: HLA-K

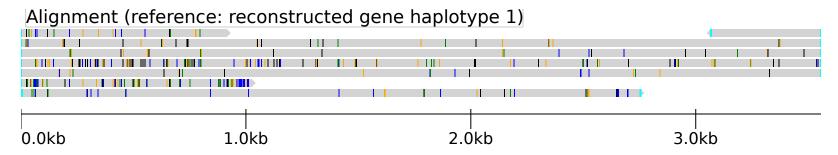
Resolution: 4th field

Full typing result:

HLA-K*01:01:01:02

bam coverage

variants



HLA-K*01:01:02 (identity: 100.00%)

Locus: HLA-L

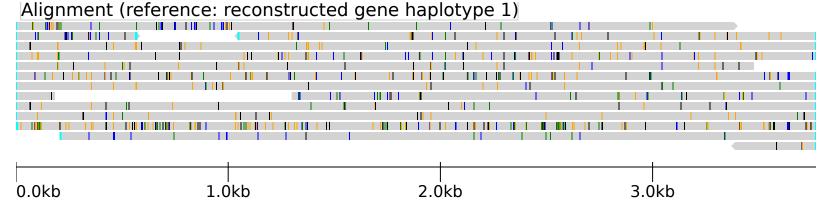
Resolution: 4th field

Full typing result:

HLA-L*01:01:01:01

bam coverage

variants



HLA-L*01:01:01 (identity: 99.97%)

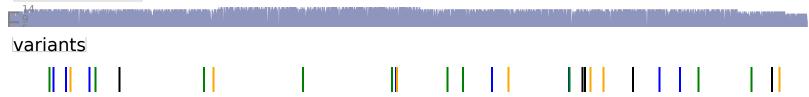
Locus: HLA-P

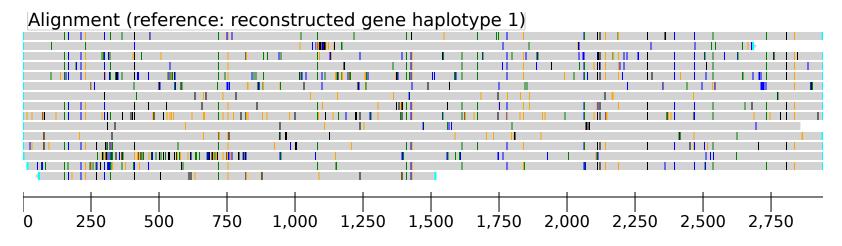
Resolution: 4th field

Full typing result:

HLA-P*01:01:01:01

bam coverage





HLA-P*01:01:01 (identity: 100.00%)

Locus: HLA-T

Resolution: 4th field

Full typing result:

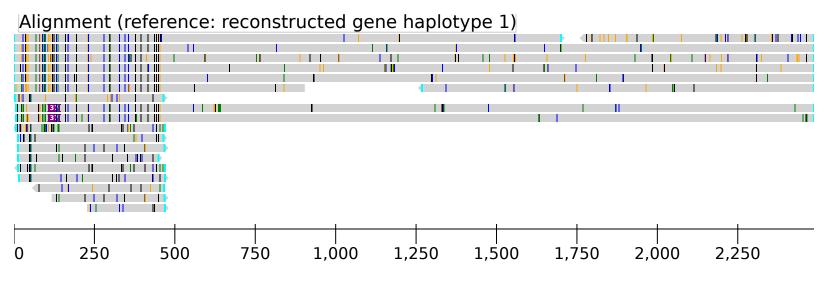
HLA-T*03:01:01:01

bam coverage



variants





HLA-T*03:01:01:01 (identity: 98.47%)

Locus: HLA-T

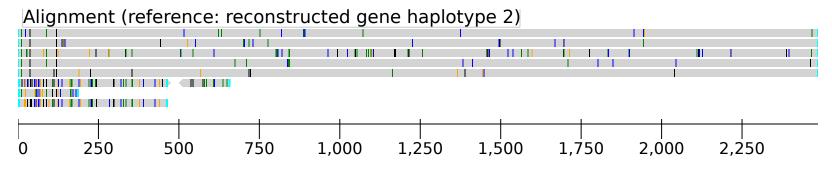
Resolution: 4th field

Full typing result:

HLA-T*01:01:01:01 | HLA-T*01:01:02

bam coverage

variants



HLA-T*01:01:01:01 (identity: 99.84%)

HLA-T*01:01:01:02 (identity: 99.84%)

Locus: HLA-U

Resolution: 4th field

Full typing result:

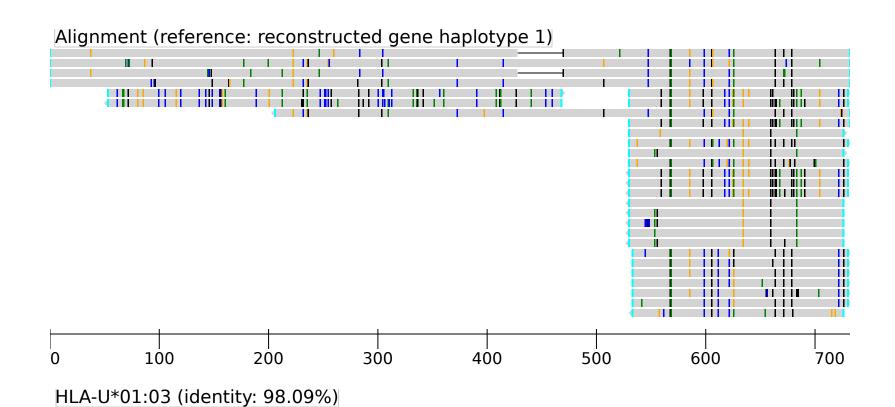
HLA-U*01:03

bam coverage

□ 24 16

variants





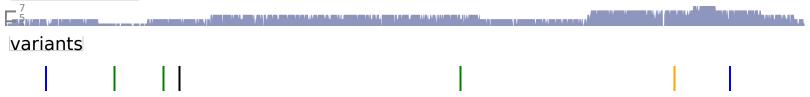
Locus: HLA-V

Resolution: 4th field

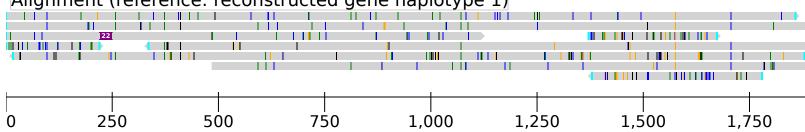
Full typing result:

HLA-V*01:01:01:03

bam coverage







HLA-V*01:01:03 (identity: 99.79%)

Locus: HLA-W

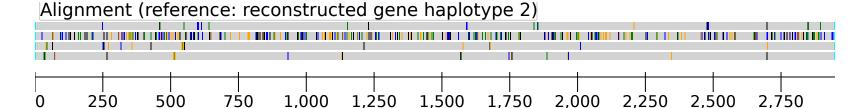
Resolution: 4th field

Full typing result:

HLA-W*01:01:01:02 | HLA-W*01:01:06

bam coverage

variants



HLA-W*01:01:01:02 (identity: 99.97%)

HLA-W*01:01:01:06 (identity: 99.93%)

Locus: HLA-W

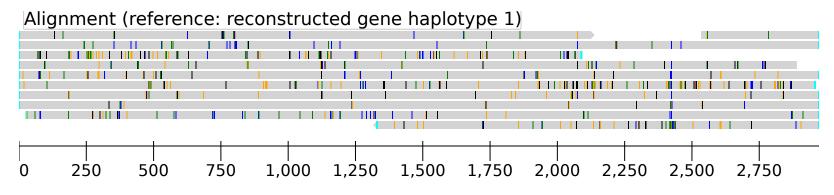
Resolution: 4th field

Full typing result:

HLA-W*03:01:01:01

bam coverage

variants



HLA-W*03:01:01:01 (identity: 98.23%)

Locus: HLA-Y

Resolution: 4th field

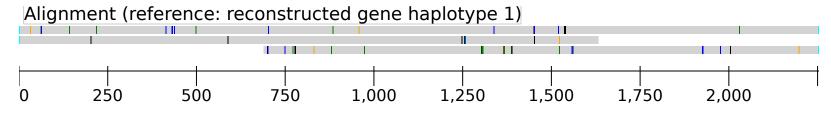
Full typing result:

HLA-Y*02:01

bam coverage

 $-\frac{3}{2}$

variants



HLA-Y*02:01 (identity: 100.00%)

Sample: NA19818 Locus: MICA Resolution: 4th field Full typing result: MICA*001:01 bam coverage **7**8 52 52 variants Alignment (reference: reconstructed gene haplotype 1) Alignment (reference: reconstructed gene napiotype 1) 4 4 11111 0.0kb 2.5kb 5.0kb 3.75kb 6.25kb 7.5kb 8.75kb 10.0kb 12.5kb MICA*001:01 (identity: 98.96%)

Locus: MICA Resolution: 4th field Full typing result: MICA*110 | MICA*004:01:03 | MICA*004:01:07 MICA*004:01:08 bam coverage variants Alignment (reference: reconstructed gene haplotype 2) Alignment (reference: reconstructed gene naplotype 2) 4 III -2 11111 6 ī 0.0kb 5.0kb 2.5kb 3.75kb 6.25kb 7.5kb 8.75kb 11.25kb MICA*110 (identity: 99.18%) MICA*004:01:03 (identity: 99.23%) MICA*004:01:07 (identity: 99.19%) MICA*004:01:08 (identity: 99.20%)

Sample: NA19818

Sample: NA19818 Locus: MICB Resolution: 4th field Full typing result: MICB*002:01:01 bam coverage F 47 variants Alignment (reference: reconstructed gene haplotype 1) 5. 0.0kb 2.5kb 3.75kb 5.0kb 6.25kb 7.5kb 12.5kb 8.75kb 10.0kb

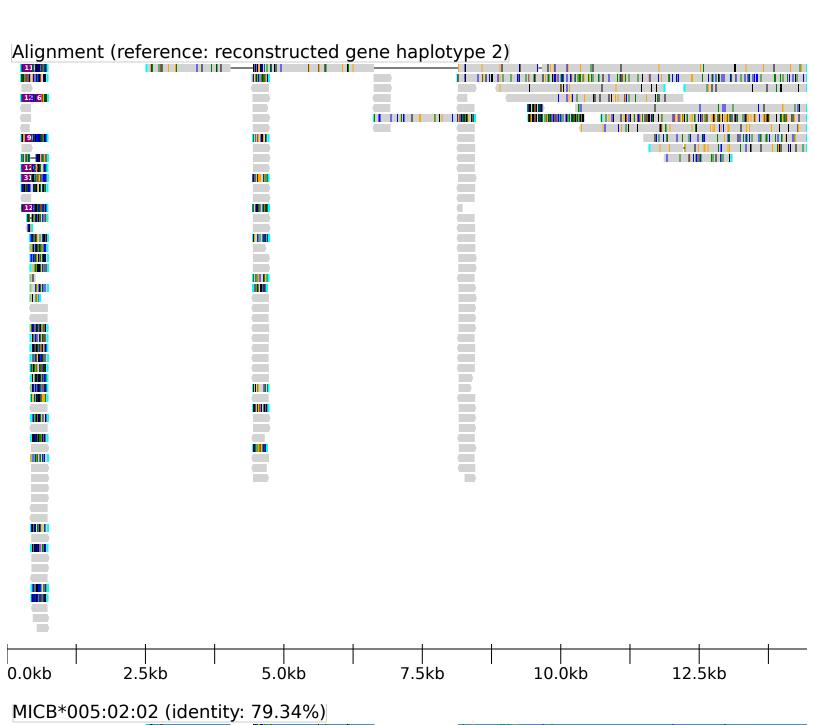
MICB*002:01:01 (identity: 99.81%)

Sample: NA19818 Locus: MICB Resolution: 4th field

Full typing result:

MICB*005:02:02





Locus: TAP1

Resolution: 4th field

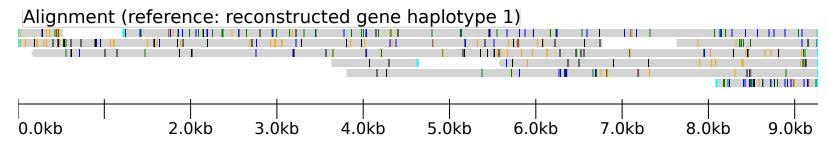
Full typing result:

TAP1*01:01:03

bam coverage

F 4

variants



TAP1*01:01:01:03 (identity: 100.00%)

Locus: TAP1

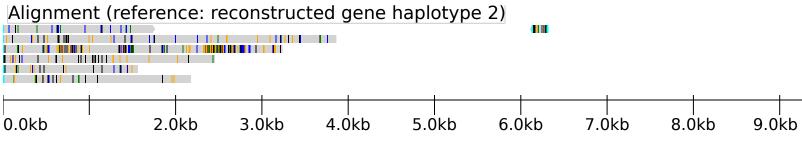
Resolution: 4th field

Full typing result:

TAP1*01:01:01:04

bam coverage

variants



TAP1*01:01:01:04 (identity: 91.66%)

Locus: TAP2

Resolution: 4th field

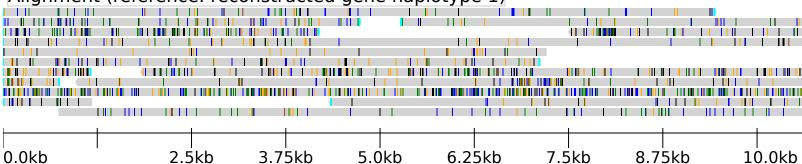
Full typing result:

TAP2*01:01:03:02 TAP2*01:01:03:03

bam coverage

variants

Alignment (reference: reconstructed gene haplotype 1)



TAP2*01:01:03:02 (identity: 99.96%)

TAP2*01:01:03:03 (identity: 99.95%)

Locus: TAP2

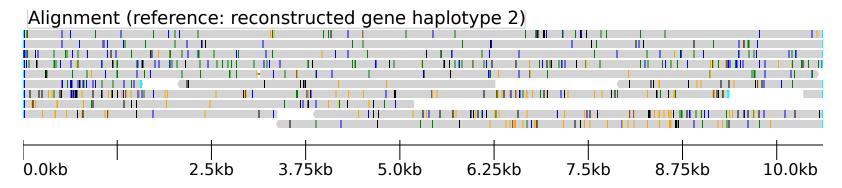
Resolution: 4th field

Full typing result:

TAP2*02:01:02:01

bam coverage

variants



TAP2*02:01:02:01 (identity: 99.87%)