Locus: HLA-A

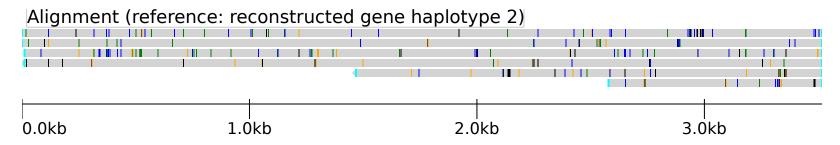
Resolution: 4th field

Full typing result:

HLA-A*02:06:01:01

bam coverage

variants



HLA-A*02:06:01:01 (identity: 99.97%)

Locus: HLA-A

Resolution: 4th field

Full typing result:

HLA-A*24:02:01:01 HLA-A*24:586N HLA-A*24:02:01:09

HLA-A*24:11N HLA-A*24:433N HLA-A*24:529N

HLA-A*24:02:01:02L HLA-A*24:02:01:04 HLA-A*24:02:01:05

HLA-A*24:02:01:06 HLA-A*24:02:01:08 HLA-A*24:02:01:108

HLA-A*24:02:01:112 HLA-A*24:02:01:140 HLA-A*24:02:01:141

bam coverage

HLA-A*24:02:01:06 (identity: 99.97%)

variants

Alignment (reference: reconstructed gene haplotype 1) 0.0kb 1.0kb 2.0kb 3.0kb HLA-A*24:02:01:01 (identity: 100.00%) HLA-A*24:586N (identity: 99.35%) HLA-A*24:02:01:09 (identity: 99.97%) HLA-A*24:11N (identity: 99.97%) HLA-A*24:433N (identity: 99.97%) HLA-A*24:529N (identity: 99.97%) HLA-A*24:02:01:02L (identity: 99.97%) HLA-A*24:02:01:04 (identity: 99.97%) HLA-A*24:02:01:05 (identity: 99.97%)

Locus: HLA-B

Resolution: 4th field

Full typing result:

HLA-B*13:01:01:01

bam coverage

variants

HLA-B*13:01:01 (identity: 100.00%)

Locus: HLA-B

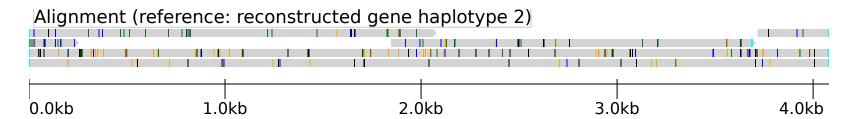
Resolution: 4th field

Full typing result:

HLA-B*40:01:02:04

bam coverage

variants



HLA-B*40:01:02:04 (identity: 99.98%)

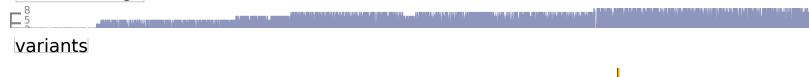
Locus: HLA-C

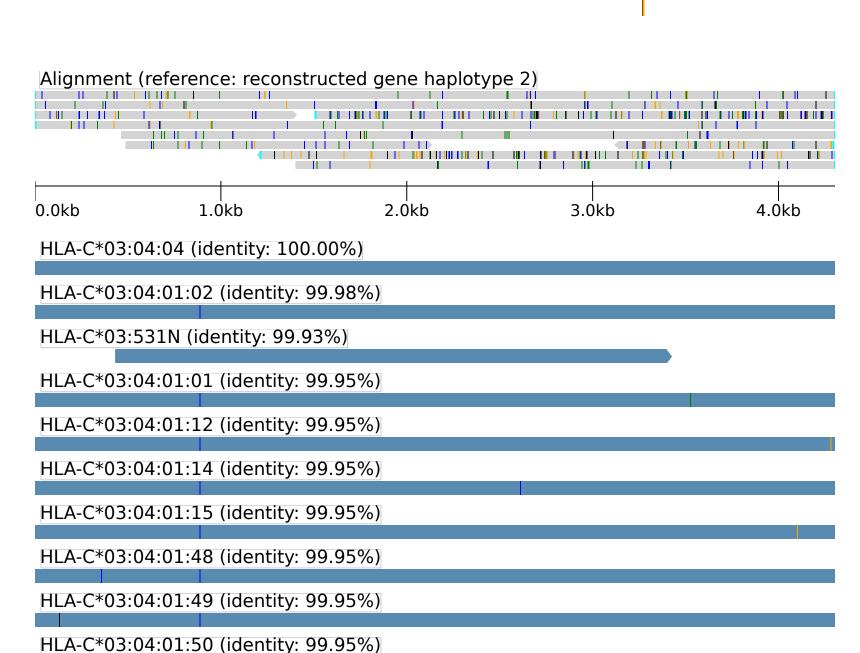
Resolution: 4th field

Full typing result:

HLA-C*03:04:04	LA-C*03:04:01:02	LA-C*03:531N
HLA-C*03:04:01:01	HLA-C*03:04:01:12	HLA-C*03:04:01:14
HLA-C*03:04:01:15	HLA-C*03:04:01:48	HLA-C*03:04:01:49
HLA-C*03:04:01:50		

bam coverage





Locus: HLA-C

Resolution: 4th field

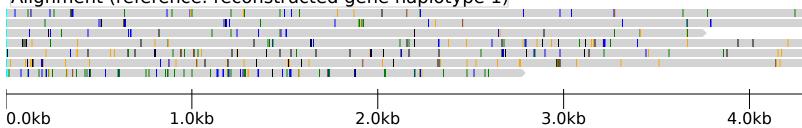
Full typing result:

HLA-C*03:77

bam coverage

variants

Alignment (reference: reconstructed gene haplotype 1)



HLA-C*03:04:01:12 (identity: 100.00%)

HLA-C*03:04:01:02 (identity: 99.98%)

HLA-C*03:04:01:13 (identity: 99.98%)

HLA-C*03:04:01:87 (identity: 99.98%)

HLA-C*03:04:01:88 (identity: 99.98%)

HLA-C*03:577 (identity: 99.98%)

HLA-C*03:655 (identity: 99.98%)

HLA-C*03:04:22 (identity: 99.98%)

HLA-C*03:642 (identity: 99.98%)

HLA-C*03:77 (identity: 99.98%)

Locus: HLA-DMA

Resolution: 4th field

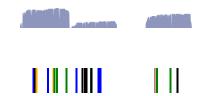
Full typing result:

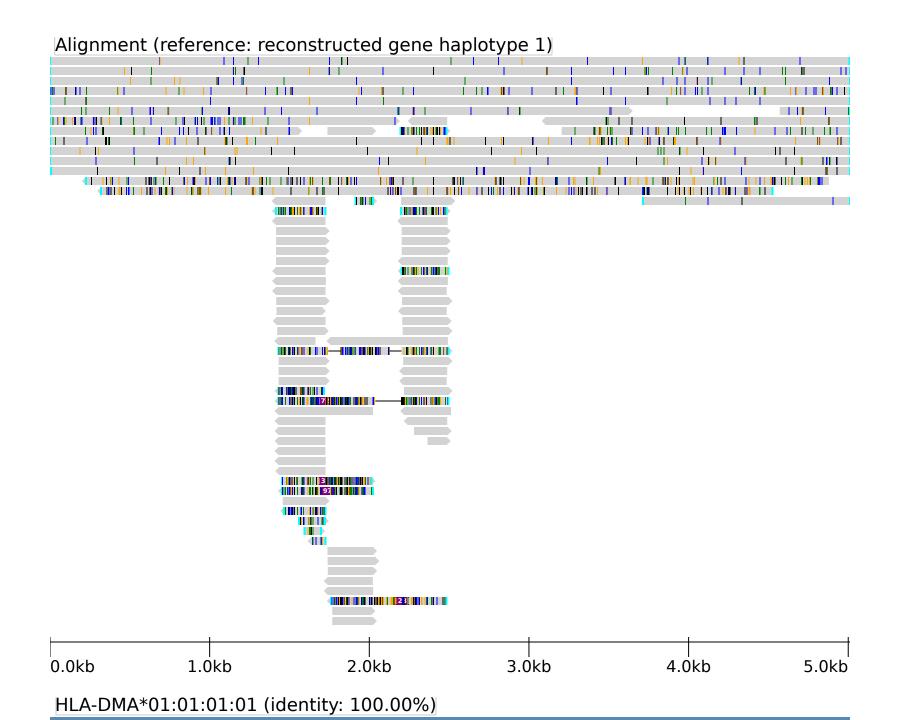
HLA-DMA*01:01:01:01

bam coverage

■ 41 27

variants





Locus: HLA-DMB

Resolution: 4th field

Full typing result:

HLA-DMB*01:01:01:01 | HLA-DMB*01:01:03 | HLA-DMB*01:01:01:46

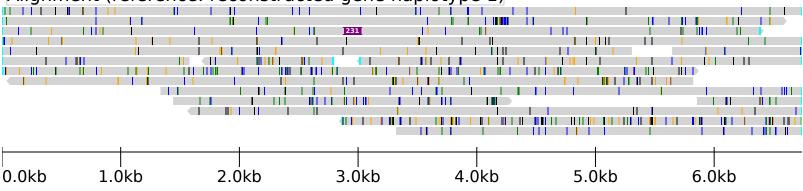
HLA-DMB*01:02:01:04 HLA-DMB*01:02:01:05

bam coverage

 $-\frac{11}{7}$

variants





HLA-DMB*01:01:01:01 (identity: 99.99%)

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

HLA-DMB*01:01:01:46 (identity: 99.97%)

HLA-DMB*01:02:01:04 (identity: 99.97%)

HLA-DMB*01:02:01:05 (identity: 99.96%)

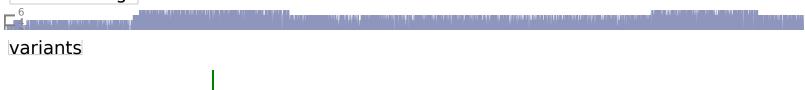
Locus: HLA-DMB

Resolution: 4th field

Full typing result:

HLA-DMB*01:01:01:02

bam coverage



Alignment (reference: reconstructed gene haplotype 2)

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

HLA-DMB*01:01:01:02 (identity: 99.99%)

Locus: HLA-DOA

Resolution: 4th field

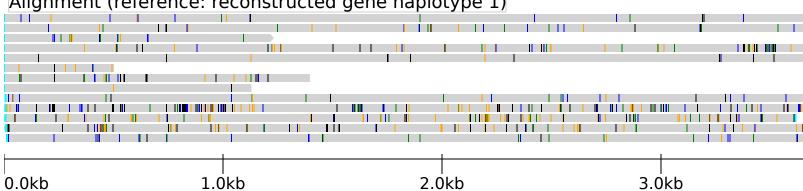
Full typing result:

HLA-DOA*01:01:01:01

bam coverage

variants

Alignment (reference: reconstructed gene haplotype 1)



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

Locus: HLA-DOB

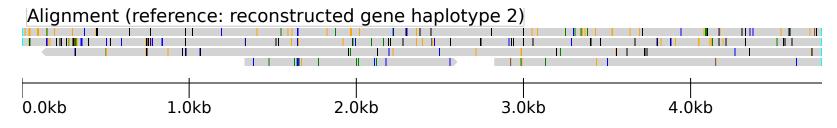
Resolution: 4th field

Full typing result:

HLA-DOB*01:01:01 HLA-DOB*01:16

bam coverage

variants



HLA-DOB*01:01:01:01 (identity: 99.87%)

HLA-DOB*01:16 (identity: 99.85%)

Locus: HLA-DOB

Resolution: 4th field

Full typing result:

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

bam coverage

variants

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

HLA-DOB*01:05 (identity: 99.92%)

Locus: HLA-DPA1

Resolution: 4th field

Full typing result:

HLA-DPA1*02:02:02:01

bam coverage

__ 15 __ 10

variants

Alignment (reference: reconstructed gene haplotype 1)

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

HLA-DPA1*02:02:02:01 (identity: 100.00%)

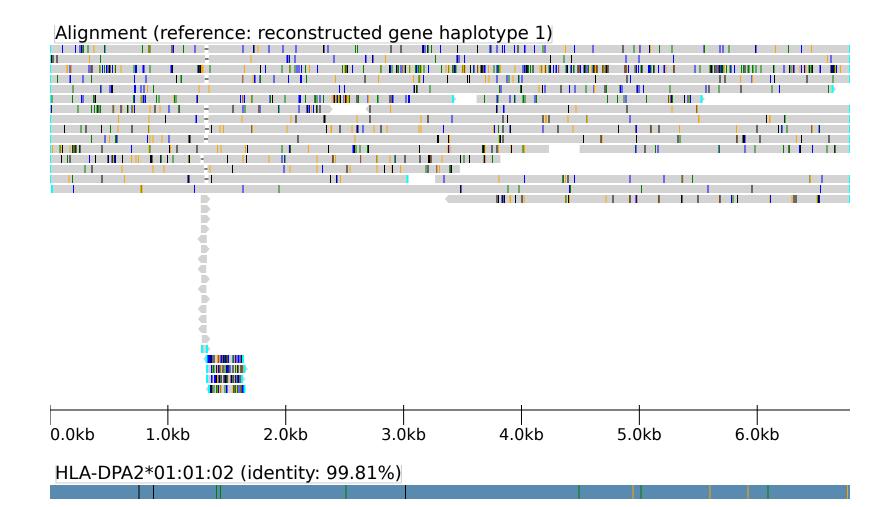
Locus: HLA-DPA2

Resolution: 4th field

Full typing result:

HLA-DPA2*01:01:02





Locus: HLA-DPB1

Resolution: 4th field

Full typing result:

HLA-DPB1*05:01:01:08 | HLA-DPB1*05:01:01:02 | HLA-DPB1*05:01:01:05

HLA-DPB1*05:01:01:38 | HLA-DPB1*05:01:01:01 | HLA-DPB1*05:01:01:32

HLA-DPB1*301:01:01:02 | HLA-DPB1*05:01:01:04 | HLA-DPB1*05:01:01:06

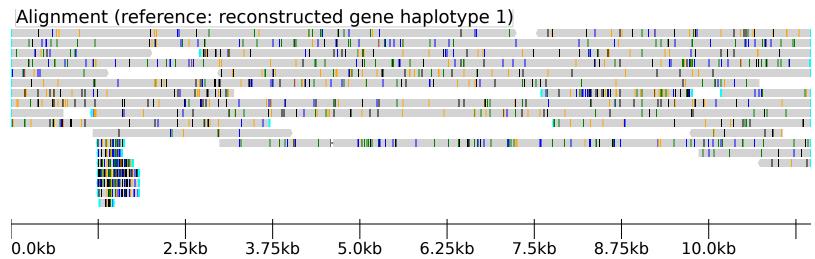
HLA-DPB1*05:01:01:07

bam coverage

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variants





HLA-DPB1*05:01:01:08 (identity: 100.00%)

HLA-DPB1*05:01:01:02 (identity: 99.99%)

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

HLA-DPB1*05:01:01:38 (identity: 99.99%)

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

HLA-DPB1*05:01:01:32 (identity: 99.98%)

HLA-DPB1*301:01:01:02 (identity: 99.98%)

HLA-DPB1*05:01:01:04 (identity: 99.97%)

HLA-DPB1*05:01:01:06 (identity: 99.97%)

HLA-DPB1*05:01:01:07 (identity: 99.97%)

Locus: HLA-DPB2 Resolution: 4th field Full typing result: HLA-DPB2*03:02 bam coverage **■** 51 34 variants Alignment (reference: reconstructed gene haplotype 1) Alignment (reference: reconstructed gene haplotype 1) Ш 0.0kb 10.0kb 12.5kb 2.5kb 5.0kb 7.5kb 15.0kb 17.5kb HLA-DPB2*03:02 (identity: 99.99%)

Sample: HG00419

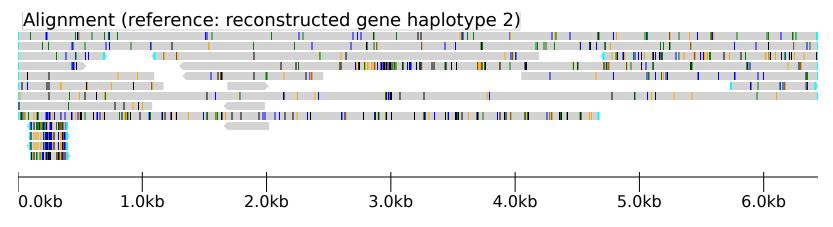
Locus: HLA-DQA1

Resolution: 4th field

Full typing result:

HLA-DQA1*03:02:01:02





HLA-DQA1*03:02:01:02 (identity: 100.00%)

Locus: HLA-DQA1

Resolution: 4th field

Full typing result:

HLA-DQA1*01:03:01:08 | HLA-DQA1*01:03:01:07

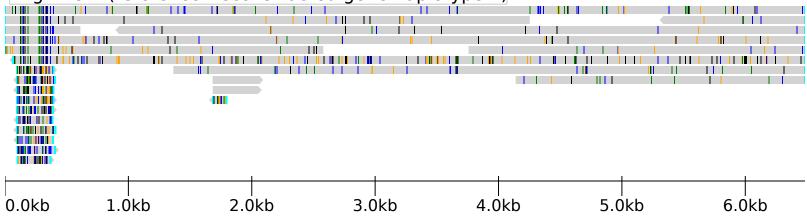
bam coverage

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variants



Alignment (reference: reconstructed gene haplotype 1)



HLA-DQA1*01:03:01:08 (identity: 99.74%)

HLA-DQA1*01:03:01:07 (identity: 99.72%)

Locus: HLA-DQA2

Resolution: 4th field

Full typing result:

HLA-DQA2*01:01:02:01

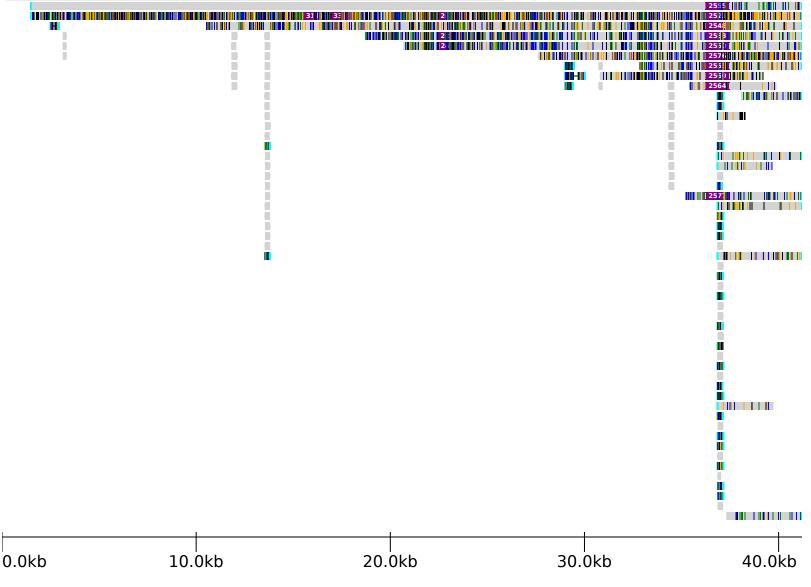
bam coverage

29

variants



Alignment (reference: reconstructed gene haplotype 1)



HLA-DQA2*01:01:02:01 (identity: 99.68%)

Locus: HLA-DQB1

Resolution: 4th field

Full typing result:

HLA-DQB1*06:01:01:01

bam coverage

variants

Alignment (reference: reconstructed gene haplotype 1)

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

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

Locus: HLA-DQB1

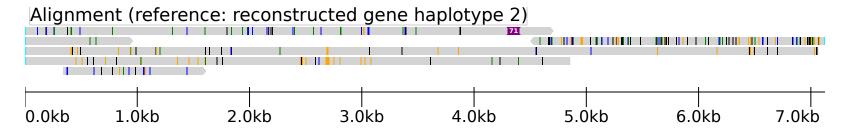
Resolution: 4th field

Full typing result:

HLA-DQB1*03:03:02:04



variants



HLA-DQB1*03:03:02:04 (identity: 99.84%)

Locus: HLA-DQB2

Resolution: 4th field

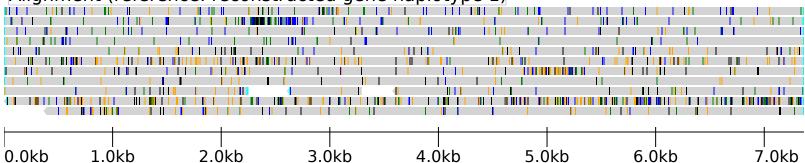
Full typing result:

HLA-DQB2*01:01:01

bam coverage

variants

Alignment (reference: reconstructed gene haplotype 1)



HLA-DQB2*01:01:01:01 (identity: 99.99%)

Locus: HLA-DQB2

Resolution: 4th field

Full typing result:

HLA-DQB2*01:01:01:15 HLA-DQB2*01:10N HLA-DQB2*01:01:01:03

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

HLA-DQB2*01:01:01:02 HLA-DQB2*01:01:08 HLA-DQB2*01:01:01:09

HLA-DQB2*01:01:01:10 HLA-DQB2*01:01:01:11 HLA-DQB2*01:01:01:12

HLA-DQB2*01:01:03 HLA-DQB2*01:05 HLA-DQB2*01:07:01:03

HLA-DQB2*01:01:05 HLA-DQB2*01:01:07 HLA-DQB2*01:01:01:13

HLA-DQB2*01:01:01:14 HLA-DQB2*01:01:01:16 HLA-DQB2*01:01:01:17

HLA-DQB2*01:01:01:18 HLA-DQB2*01:02:01:01 HLA-DQB2*01:02:01:02

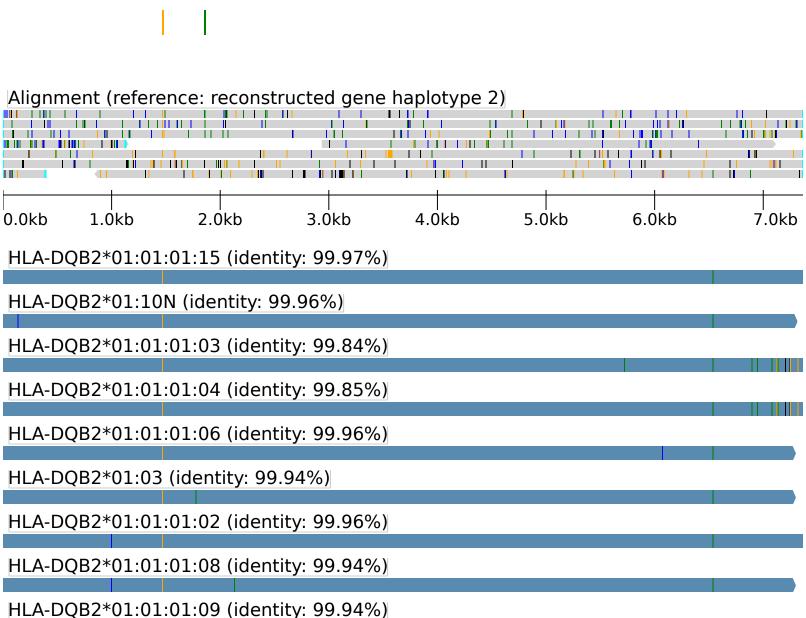
HLA-DQB2*01:02:01:03 HLA-DQB2*01:02:01:04 HLA-DQB2*01:02:02:01

HLA-DQB2*01:02:02:02 HLA-DQB2*01:02:02:03 HLA-DQB2*01:02:02:04

bam coverage

HLA-DQB2*01:01:01:10 (identity: 99.85%)

variants



Locus: HLA-DRA

Resolution: 4th field

Full typing result:

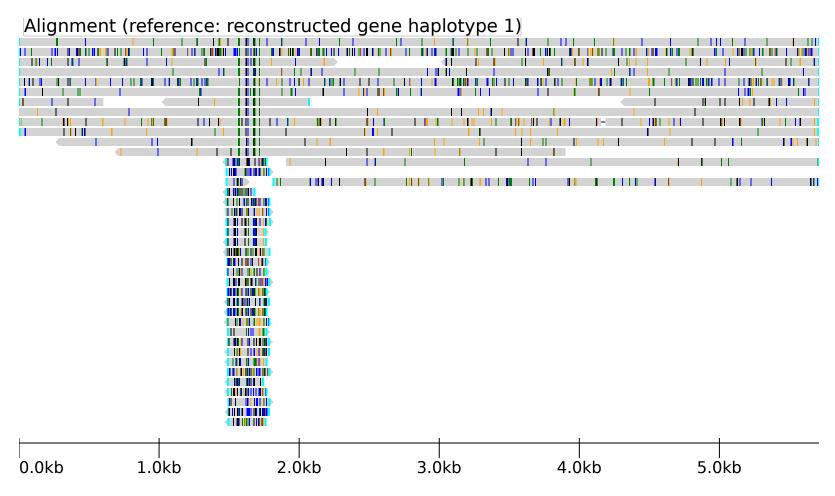
HLA-DRA*01:01:01:01

bam coverage

23

variants





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

Locus: HLA-DRA

Resolution: 4th field

Full typing result:

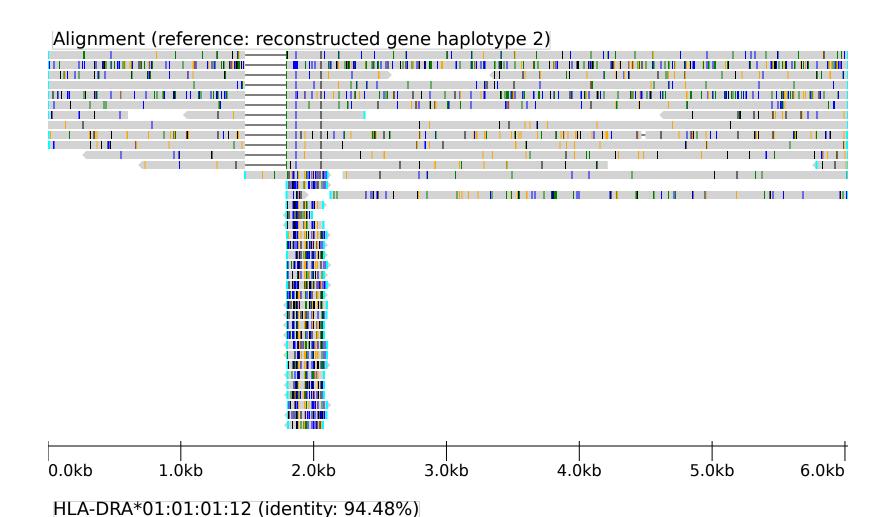
HLA-DRA*01:01:01:12

bam coverage

L 22

variants





Locus: HLA-DRB1

Resolution: 4th field

Full typing result:

HLA-DRB1*08:03:02:02

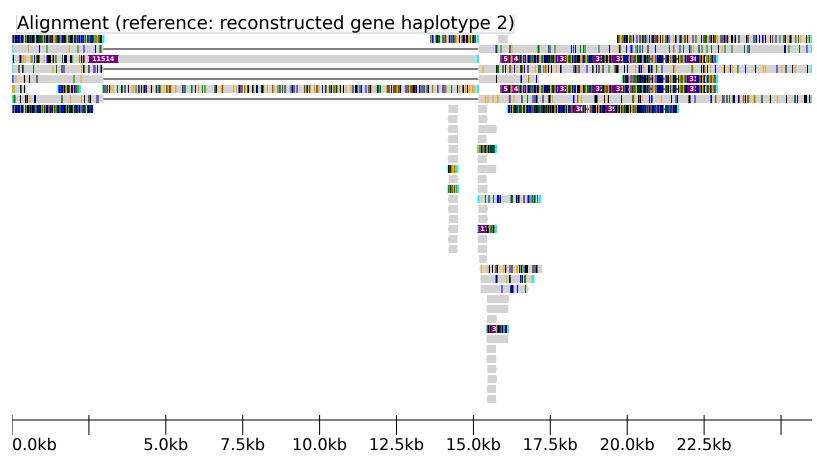
bam coverage

□ ²⁰ ¹⁴

variants







HLA-DRB1*08:03:02:02 (identity: 11.86%)

Locus: HLA-DRB1 Resolution: 4th field Full typing result: HLA-DRB1*09:21:01:01 | HLA-DRB1*09:01:02:01 | HLA-DRB1*09:01:02:02 HLA-DRB1*09:32 bam coverage variants Alignment (reference: reconstructed gene haplotype 1) man<mark>an i di dikin i m</mark>inin i 26 2: 2 2 51 П 10.0kb 15.0kb 17.5kb HLA-DRB1*09:21:01:01 (identity: 55.58%) HLA-DRB1*09:01:02:01 (identity: 55.57%) HLA-DRB1*09:01:02:02 (identity: 55.57%) HLA-DRB1*09:32 (identity: 55.56%) -||| ||| ||

Sample: HG00419

Sample: HG00419 Locus: HLA-DRB4 Resolution: 4th field Full typing result: HLA-DRB4*01:03:01:01 | HLA-DRB4*01:03:01:03 | HLA-DRB4*01:03:01:18 HLA-DRB4*01:152 HLA-DRB4*01:03:01:02N bam coverage variants Alignment (reference: reconstructed gene haplotype 1) 6 0.0kb 2.5kb 5.0kb 7.5kb 10.0kb 12.5kb 15.0kb HLA-DRB4*01:03:01:01 (identity: 99.47%) HLA-DRB4*01:03:01:03 (identity: 99.47%) HLA-DRB4*01:03:01:18 (identity: 99.46%) HLA-DRB4*01:152 (identity: 99.46%) HLA-DRB4*01:03:01:02N (identity: 99.34%)

Locus: HLA-E

Resolution: 4th field

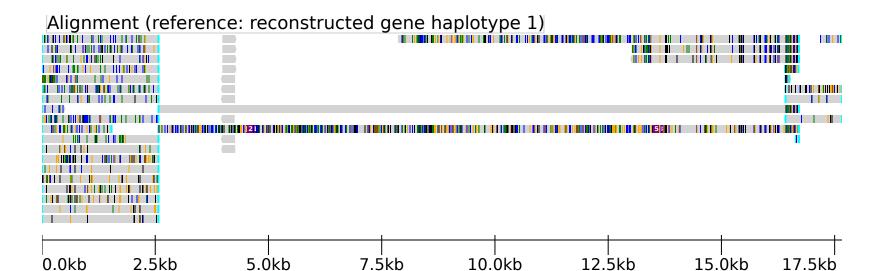
Full typing result:

HLA-E*01:03:01:01 | HLA-E*01:03:01:02 | HLA-E*01:03:01:14

bam coverage







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

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

HLA-E*01:03:01:14 (identity: 100.00%)

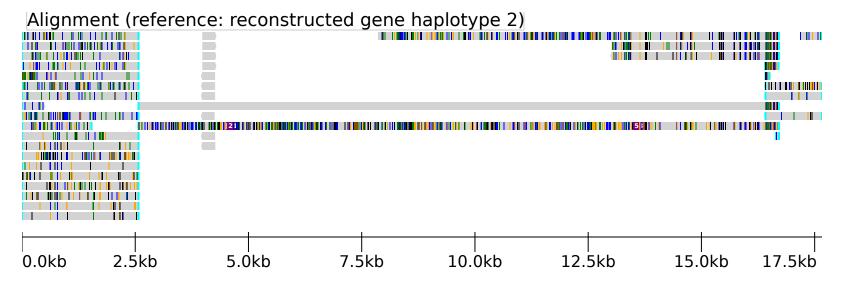
Locus: HLA-E

Resolution: 4th field

Full typing result:

HLA-E*01:03:01:14 | HLA-E*01:03:01:01 | HLA-E*01:03:01:02





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

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

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

Locus: HLA-F

Resolution: 4th field

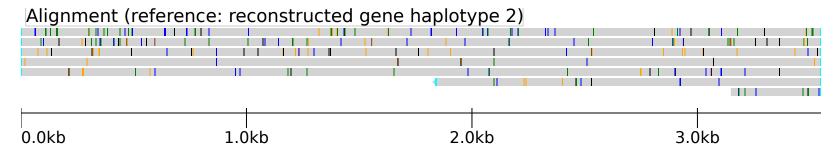
Full typing result:

HLA-F*01:01:01:13

bam coverage

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variants



HLA-F*01:01:13 (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

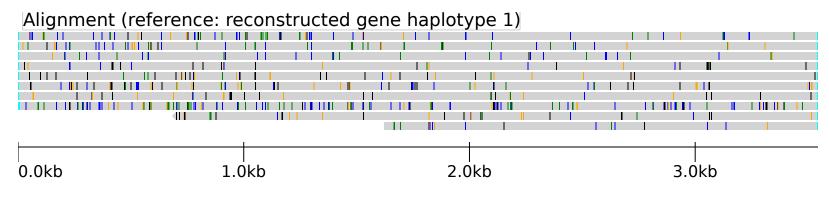
HLA-F*01:01:01:42 HLA-F*01:01:01:43 HLA-F*01:01:06

HLA-F*01:01:07 HLA-F*01:01:08 HLA-F*01:01:11

HLA-F*01:02:01:02 HLA-F*01:10 HLA-F*01:12

bam coverage





HLA-F*01:01:01:09 (identity: 100.00%)

HLA-F*01:01:01:10 (identity: 99.97%)

HLA-F*01:01:01:11 (identity: 99.97%)

HLA-F*01:01:01:12 (identity: 99.97%)

HLA-F*01:01:01:27 (identity: 99.97%)

HLA-F*01:01:01:29 (identity: 99.97%)

HLA-F*01:01:01:42 (identity: 99.97%)

HLA-F*01:01:01:43 (identity: 99.97%)

HLA-F*01:01:06 (identity: 99.97%)

HLA-F*01:01:07 (identity: 99.97%)

Locus: HLA-G

Resolution: 4th field

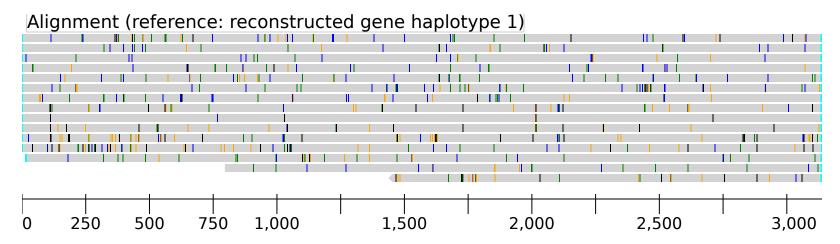
Full typing result:

HLA-G*01:01:01:02

bam coverage

<u>|</u> 9 | |

variants



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

Locus: HLA-H

Resolution: 4th field

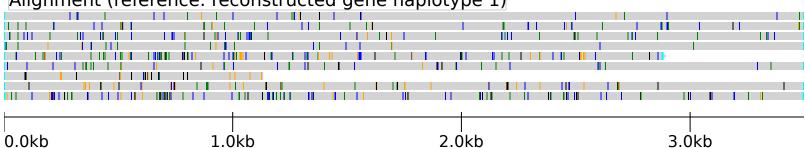
Full typing result:

HLA-H*01:01:01:01

bam coverage

variants

Alignment (reference: reconstructed gene haplotype 1)



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

Locus: HLA-J

Resolution: 4th field

Full typing result:

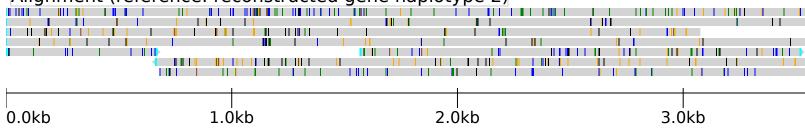
HLA-J*01:01:05

bam coverage

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variants

Alignment (reference: reconstructed gene haplotype 2)



HLA-J*01:01:05 (identity: 100.00%)

Locus: HLA-J

Resolution: 4th field

Full typing result:

HLA-J*01:01:02

bam coverage

variants

Alignment (reference: reconstructed gene haplotype 1)

0.0kb 1.0kb 2.0kb 3.0kb

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

Locus: HLA-K

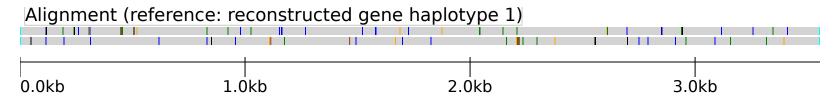
Resolution: 4th field

Full typing result:

HLA-K*01:02

bam coverage

variants



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

Locus: HLA-L

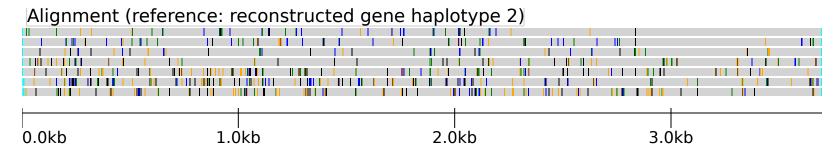
Resolution: 4th field

Full typing result:

HLA-L*01:01:02

bam coverage

variants



HLA-L*01:01:02 (identity: 99.86%)

Locus: HLA-L

Resolution: 4th field

Full typing result:

HLA-L*01:03

bam coverage

variants

Alignment (reference: reconstructed gene haplotype 1)

0.0kb 1.0kb 2.0kb 3.0kb

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

Locus: HLA-N

Resolution: 4th field

Full typing result:

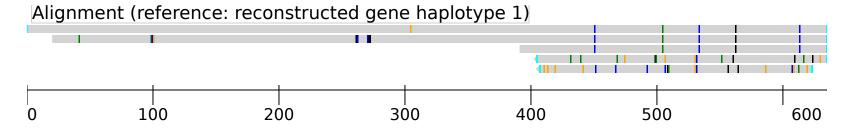
HLA-N*01:01:01:01

bam coverage

5 3

variants





HLA-N*01:01:01 (identity: 99.21%)

Locus: HLA-P

Resolution: 4th field

Full typing result:

HLA-P*02:01:01:02

bam coverage

variants

Alignment (reference: reconstructed gene haplotype 1)

0 250 500 750 1,000 1,250 1,500 1,750 2,000 2,250 2,500 2,750

HLA-P*02:01:01:02 (identity: 99.93%)

Locus: HLA-P

Resolution: 4th field

Full typing result:

HLA-P*02:01:01:01

bam coverage

variants

Alignment (reference: reconstructed gene haplotype 2)



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

Locus: HLA-T

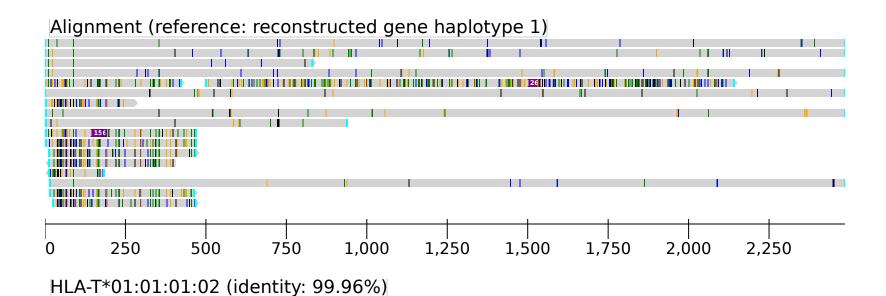
Resolution: 4th field

Full typing result:

HLA-T*01:01:01:02

bam coverage

variants



Locus: HLA-U

Resolution: 4th field

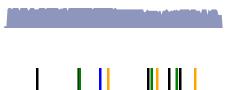
Full typing result:

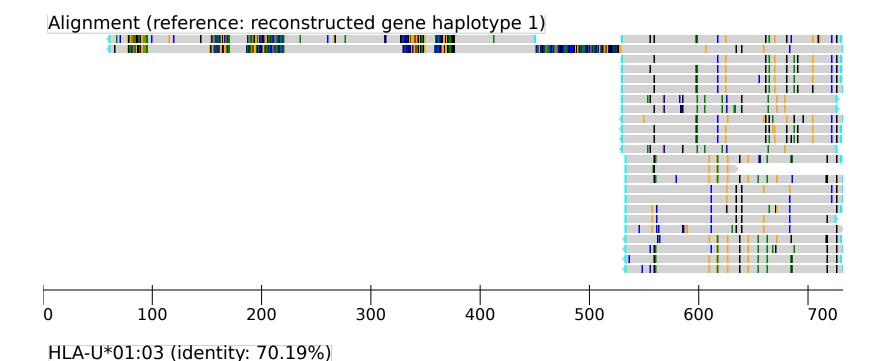
HLA-U*01:03

bam coverage

□ ²¹ ¹⁴

variants





Locus: HLA-V

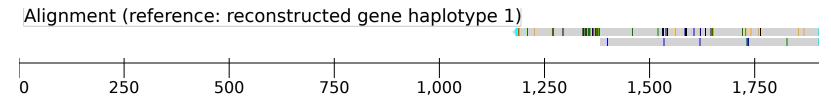
Resolution: 4th field

Full typing result:

HLA-V*01:01:01:04

bam coverage

variants



HLA-V*01:01:01:04 (identity: 94.86%)

Locus: HLA-W

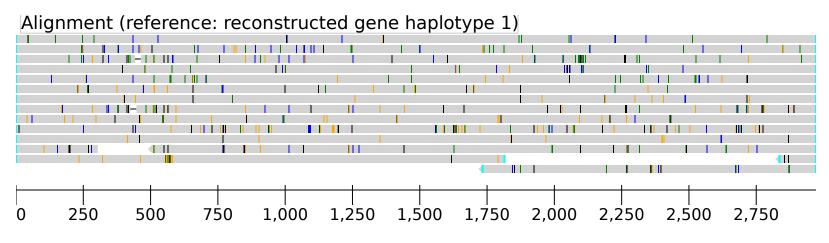
Resolution: 4th field

Full typing result:

HLA-W*01:01:01:07







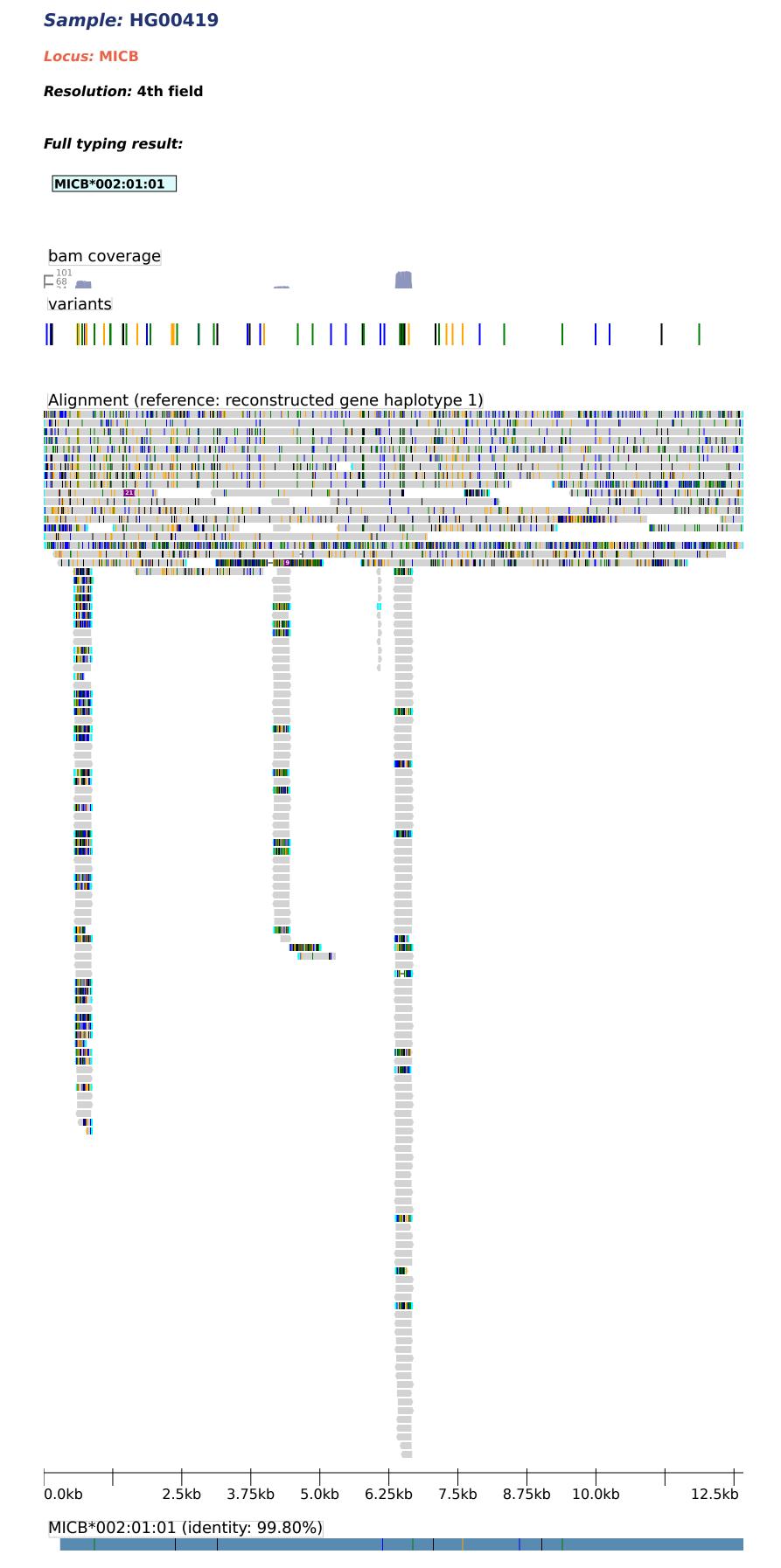
HLA-W*01:01:01:07 (identity: 99.90%)

Sample: HG00419 Locus: MICA Resolution: 4th field Full typing result: MICA*008:04:01 MICA*285 MICA*008:01:02 MICA*008:01:01 bam coverage **□** 23 15 variants Alignment (reference: reconstructed gene haplotype 1) i i<mark>liji iliji ililili</mark> ili ili iliji ili iliji ili ili B IIII 0.0kb 2.5kb 3.75kb 5.0kb 6.25kb 7.5kb 8.75kb 12.5kb 10.0kb MICA*008:04:01 (identity: 99.95%) MICA*285 (identity: 99.95%) MICA*008:01:02 (identity: 99.93%) MICA*008:01:01 (identity: 99.92%)

Sample: HG00419 Locus: MICA Resolution: 4th field Full typing result: MICA*001:01 bam coverage variants Alignment (reference: reconstructed gene haplotype 2) (IIIIII IIII 7 1 6

0.0kb 2.5kb 3.75kb 5.0kb 6.25kb 7.5kb 8.75kb 10.0kb 12.5kb

MICA*001:01 (identity: 99.29%)





Locus: TAP1

Resolution: 4th field

Full typing result:

TAP1*01:01:01:05



variants

Alignment (reference: reconstructed gene haplotype 1)

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

TAP1*01:01:01:05 (identity: 99.99%)

Locus: TAP1

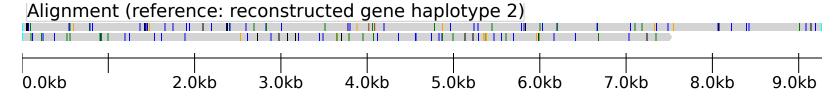
Resolution: 4th field

Full typing result:

TAP1*01:01:01:03

bam coverage

variants



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

Locus: TAP2

Resolution: 4th field

Full typing result:

TAP2*01:01:02:01 TAP2*01:01:07:05

bam coverage

variants

Alignment (reference: reconstructed gene haplotype 1)

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

TAP2*01:01:02:01 (identity: 99.78%)

TAP2*01:01:07:05 (identity: 99.76%)

Locus: TAP2

Resolution: 4th field

Full typing result:

TAP2*02:01:02:01



variants

Alignment (reference: reconstructed gene haplotype 2)

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

TAP2*02:01:02:01 (identity: 99.67%)