



IMMPORT
BIOINFORMATICS FOR THE FUTURE OF IMMUNOLOGY

ImmPort MHC Alignment Results

Allele Alignment Results

The aligned allele features are based on custom query input options to on the Allele Search page. The alignment sequence is based on the ANRI/IMGT reference. The scroll bar is used to view the entire matrix of the sequence alignment while maintaining the reference sequence at the top of the viewer. To modify the parameters selected, click 'Modify Search'. The Alignment span can be All, Coordinates (start/end) or Features (exon, intron, 5UTR, 3UTR).

Alignment Viewer Legend:

- '-' denotes the same sequence as the reference
- '*' denotes not sequenced
- '.' denotes gaps

NOTE: If the alignment viewer coordinates and letters are not aligned, use the following correction path:
Firefox > Tools > Options > Content > Select Fonts & Colors from the middle of pop-up page > Click
Advanced



Allele Alignment Results

[\(Modify Search\)](#)

Allele Search Criteria

Locus Name: HLA-A
 Search For: All Alleles
 Search Using: Allele Name
 Search Option: Like Text: A*0101

Alignment Specific Criteria

Sequence Type: genomic
 Alignment Span: ALL Types:

Click on Modify Search to go back to the MHC Allele search page

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Allele ID	1	10	20	30	40	50	60	70	80
A*01010101 (Ref)	C	A	G	G	A	G	C	A	G
A*01010101	C	A	G	G	A	G	C	A	G
A*01010102M	*	*	*	*	*	*	*	*	*

Select any or all boxes for detailed allele report or export the output file for further analysis



Allele Detailed Report

A*01010101

Collapse All: Expand All:

Allele Summary

Allele Name:	A*01010101
IMGT/HLA Acc:	HLA00001
Sequence Features:	
CWD Allele	Yes
Entrez Gene ID:	3105 [Details Build 36.1, hg18] [Details Build 35, hg17]
Assigned Date:	1989-08-01
Last Update:	2003-02-04
Reference Sequence Sources:	Z93949, X55710, M24043, CR759913, AL645935, AJ278305,
Reference Cell Lines:	COX, MOLT-4, LCL721, APD, PP,
Aliases:	A*010101g (gcode), A*01011 (changed),

Allele Frequencies

Allele Frequencies for A*01010101

(1) Ordered by Data Type and Population Area
 (2) Population data acquired from the 13th International Histocompatibility Workshop and Congress 2003.
 (3) Serological pairs (A*02, A*92) and (B*15, B*95) are identical

Allele Name	Data Type	Population Area	Allele Freq	Allele Count	Total Alleles Examined
A*0101	sequencing	Australia	0.0222	18	810
A*0101	sequencing	Europe	0.1641	600	3656

PubMed Publications

References:

PubMed ID	Title
[15140828]	Complete MHC haplotype sequencing for common disease gene mapping
[2251137]	Nucleotide sequence of an HLA-A1 gene
[3375250]	Nature of polymorphism in HLA-A, -B, and -C molecules
[9349617]	A nucleotide insertion in exon 4 is responsible for the absence of expression of an HLA-A*01 allele

Sequences

Gene UTR and Exon Sequence:
 5'UTR Sequence Length: 300 nts
CAGGAGCAGAGGGGTCAGGGCGAAGTCCG **AGGGCGTGGCTCTCAGGGTCTCAG**
GCCCCGAAGGCGGTGTATGGAT **TAGTCCAGCCTTGGGGATTCCCCAACTCCGCAG**

Click on Export to open or save an output file for further analysis

Export



Allele Alignment Results

The aligned allele features are based on the query input options. The alignment reference sequence is based on the ANRI/IMGT reference. To modify the parameters selected, click Modify Search. A summary of the search criteria is displayed. The results show the allele name/CWD, Sequence Features and Allele Features which can be sorted. Click each feature and more detailed information will be displayed.

Allele Query Results

[\(Modify Search\)](#)

Allele Search Criteria

Locus Name: HLA-A
Search For: All Alleles
Search Using: Allele Name
Search Option: Like

Text: A*

Click on Modify Search to go back to the MHC Allele search page

Click on Sequence and Allele Features for detailed information. See next 3 slides

Selected items: A*01010101, A*01010102N, A*010102

<input type="checkbox"/> Allele Name/CWD	Sequence Features	Allele Frequency
<input checked="" type="checkbox"/> A*01010101 CWD		
<input checked="" type="checkbox"/> A*01010102N		
<input checked="" type="checkbox"/> A*010102		
<input type="checkbox"/> A*010103		
<input type="checkbox"/> A*010104		
<input type="checkbox"/> A*010105		

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Sort Ascending
Sort Descending
Columns

- Allele Name/CWD
- Sequence Features
- Allele Frequency

Select any or all boxes for detailed view or export the output file for further analysis



ImmPort MHC Alignment Results

Allele Variant Sequence Features for **A*01010101**

Locus Name: **HLA-A**

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Variant Type	Sequence Feature Names	Sequence Feature Types	Positions	Sequence Motif
A*0101	Hsa_HLA-A_allele	Structural - Complete protei		
Hsa HLA-A SF2 UT1	Hsa_HLA-A_full-length prot	Structural - Complete protei	-24..341	-24M -23A -22V -21M -20A
Hsa HLA-A SF3 UT1	Hsa_HLA-A_signal peptide	Structural - Cleaved peptide	-24..-1	-24M -23A -22V -21M -20A
Hsa HLA-A SF4 UT1	Hsa_HLA-A_mature protein	Structural - Complete protei	1..341	1G 2S 3H 4S 5M 6R 7Y 8F
Hsa HLA-A SF5 UT1	Hsa_HLA-A_alpha 1 domai	Structural - Domain	1..90	1G 2S 3H 4S 5M 6R 7Y 8F
Hsa HLA-A SF6 UT1	Hsa_HLA-A_alpha 2 domai	Structural - Domain	91..182	91G 92S 93H 94T 95I 96Q
Hsa HLA-A SF7 UT1	Hsa_HLA-A_alpha 3 domai	Structural - Domain	183..274	183D 184P 185P 186K 187T
Hsa HLA-A SF8 UT1	Hsa_HLA-A_alpha 3 domai	Structural - Domain	275..284	275E 276L 277S 278S 279Q
Hsa HLA-A SF9 UT1	Hsa_HLA-A_putative transm	Structural - Domain	285..308	285V 286G 287I 288I 289A
Hsa HLA-A SF10 UT1	Hsa_HLA-A_putative cytopl	Structural - Domain	309..341	309R 310R 311K 312S 313S
Hsa HLA-A SF11 UT1	Hsa_HLA-A_N-terminus seq	Structural - Secondary struct	1..2	1G 2S
Hsa HLA-A SF12 UT1	Hsa_HLA-A_beta-strand 1	Structural - Secondary struct	3..14	3H 4S 5M 6R 7Y 8F 9F 10T
Hsa HLA-A SF13 UT1	Hsa_HLA-A_loop between t	Structural - Secondary struct	15..17	15P 16G 17R
Hsa HLA-A SF14 UT1	Hsa_HLA-A_beta-strand 2	Structural - Secondary struct	18..28	18G 19E 20P 21R 22F 23I
Hsa HLA-A SF15 UT1	Hsa_HLA-A_loop between t	Structural - Secondary struct	29..30	29D 30D
Hsa HLA-A SF16 UT1	Hsa_HLA-A_beta-strand 3	Structural - Secondary struct	31..37	31T 32Q 33F 34V 35R 36F
Hsa HLA-A SF17 UT1	Hsa_HLA-A_loop between t	Structural - Secondary struct	38..45	38S 39D 40A 41A 42S 43Q
Hsa HLA-A SF18 UT1	Hsa_HLA-A_beta-strand 4	Structural - Secondary struct	46..47	46E 47P
Hsa HLA-A SF19 UT1	Hsa_HLA-A_loop between t	Structural - Secondary struct	48..49	48R 49A
Hsa HLA-A SF20 UT1	Hsa_HLA-A_alpha-helix 1	Structural - Secondary struct	50..54	50P 51W 52I 53E 54Q
Hsa HLA-A SF21 UT1	Hsa_HLA-A_loop between :	Structural - Secondary struct	55..56	55E 56G
Hsa HLA-A SF22 UT1	Hsa_HLA-A_alpha-helix 2	Structural - Secondary struct	57..84	57P 58E 59Y 60W 61D 62Q
Hsa HLA-A SF23 UT1	Hsa_HLA-A_loop between :	Structural - Secondary struct	85..93	85Y 86N 87Q 88S 89E 90D
Hsa HLA-A SF24 UT1	Hsa_HLA-A_beta-strand 5	Structural - Secondary struct	94..103	94T 95I 96Q 97I 98M 99Y

Allele Frequencies for A*01010101

(1) Ordered by Data Type and Population Area

(2) Population data acquired from the 13th International Histocompatibility Workshop and Congress 2003

(3) Serological pairs (A*02, A*92) and (B*15, B*95) are identical

Allele Name	Data Type	Population Area	Allele Freq	Allele Count	Total Alleles Examined
A*0101	sequencing	Australia	0.0222	18	810
A*0101	sequencing	Europe	0.1641	600	3656
A*0101	sequencing	North Africa	0.1367	38	278
A*0101	sequencing	North America	0.0352	47	1337
A*0101	sequencing	North-East Asia	0.0586	62	1058
A*0101	sequencing	Oceania	0.0101	10	994
A*0101	sequencing	Other	0.0718	78	1087
A*0101	sequencing	South America	0.0021	1	479
A*0101	sequencing	South-East Asia	0.0072	42	5847
A*0101	sequencing	South-West Asia	0.0991	113	1140
A*0101	sequencing	Sub-Saharan Africa	0.0526	185	3516
A*01	serological	Australia	0.0222	18	810
A*01	serological	Europe	0.1641	600	3656
A*01	serological	North Africa	0.1403	39	278
A*01	serological	North America	0.0351	47	1338
A*01	serological	North-East Asia	0.0595	63	1058
A*01	serological	Oceania	0.0101	10	994
A*01	serological	Other	0.0753	82	1089



ImmPort MHC Alignment Results

Alternatively, Click on 'View Details' for the Allele Detailed Report indicating the Allele Summary, Allele Frequencies, PubMed Publications, and Sequences.

Allele Detailed Report

A*010102 A*01010102N A*01010101

Collapse All: Expand All:

Allele Summary

Allele Name: A*010102
 IMGT/HLA Acc: [HLA01244](#)
 Sequence Features:
 CWD Allele : No
 Entrez Gene ID: 3105 [\[Details Build_36.1, hg18\]](#)
[\[Details Build_35, hg17\]](#)
 Assigned Date: 2000-05-18
 Last Update: 2003-02-04
 Reference Sequence Sources: AF248059, AF248060,
 Reference Cell Lines: GN00348,
 Aliases: A*01012 (changed),

Allele Frequencies

Allele Frequencies for A*010102

(1) Ordered by Data Type and Population Area
 (2) Population data acquired from the 13th International Histocompatibility Workshop and Congress 2003
 (3) Serological pairs (A*02, A*92) and (B*15, B*95) are identical

Allele Name	Data Type	Population Area	Allele Freq	Allele Count	Total Alleles Examined
A*0101	sequencing	Australia	0.0222	18	810
A*0101	sequencing	Europe	0.1641	600	3656
A*0101	sequencing	North Africa	0.1367	38	278
A*0101	sequencing	North America	0.0352	47	1337
A*0101	sequencing	North-East Asia	0.0586	62	1058
A*0101	sequencing	Oceania	0.0101	10	994
A*0101	sequencing	Other	0.0718	78	1087
A*0101	sequencing	South America	0.0021	1	479
A*0101	sequencing	South-East Asia	0.0072	42	5847
A*0101	sequencing	South-West Asia	0.0991	113	1140
A*0101	sequencing	Sub-Saharan Africa	0.0526	185	3516
A*01	serological	Australia	0.0222	18	810
A*01	serological	Europe	0.1641	600	3656
A*01	serological	North Africa	0.1403	39	278
A*01	serological	North America	0.0351	47	1338
A*01	serological	North-East Asia	0.0595	63	1058
A*01	serological	Oceania	0.0101	10	994
A*01	serological	Other	0.0753	82	1089
A*01	serological	South America	0.0021	1	480
A*01	serological	South-East Asia	0.0072	42	5847
A*01	serological	South-West Asia	0.1044	119	1140
A*01	serological	Sub-Saharan Africa	0.0628	221	3517

PubMed Publications

References:

PubMed ID	Title
[12135434]	Novel HLA-A locus alleles including A*01012, A*0306, A*0308, A*2616, A*2617, A*3009, A*3206, A*3403, A*3602 and A*6604.

Sequences

Gene UTR and Exon Sequence:
 5'UTR Sequence data not available
 3'UTR Sequence data not available

Protein Sequence: [View Complete Sequence](#)
 Genomic Sequence: [View Complete Sequence](#)
 CDS Sequence: [View Complete Sequence](#)

Click on the tabs to see the detailed report of each allele

Click on Export to open or save an output file for further analysis