

Basic MHC Allele Query Overview

The human leukocyte antigen system (HLA) is the name of the human major histocompatibility complex (MHC). Data obtained from IMGT/HLA database (<http://www.ebi.ac.uk/imgt/hla/>) maintained by the Anthony Nolan Research Institute (ANRI) includes accession, allele name, version, ethnic origin, cell source, gene structure, protein sequence, and genomic sequence.

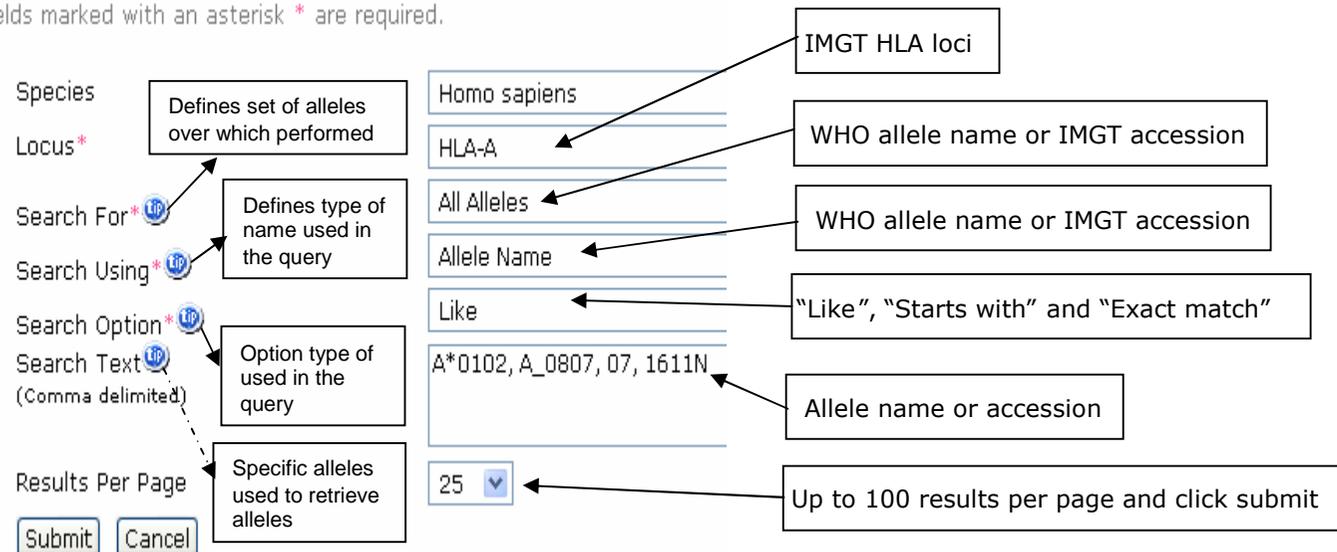
Search for allele records for a MHC locus using the allele name, IMGT accession, CWD allele name, G-Code group code, protein and transcript sequence. Or enter specific allele names that conform to the HLA nomenclature.

For example, A*0202,A*0205, or A0202, A0205, or 0202,0205, or any combination. All searches are case-insensitive. For g-codes, an optional g-suffix can be added. For sequence-based searches, protein or transcript sequences are entered. The 'like' Search Option is a string match operator and not blast-based.

-- CWD alleles and g-codes are described in the paper, "Common and well-documented HLA alleles: report of the Ad-Hoc committee of the American Society for Histocompatibility and Immunogenetics" [[17462507](#)]. -- G-code grouping data was enhanced with ambiguity typing data obtained from Anthony Nolan, [[IMGT/HLA Database](#)]. -- Population data used for generation of allele frequencies was obtained from dbMHC, [[Human Anthropology](#)].

The ImmPort MHC Allele Query page displays the following fields:

Fields marked with an asterisk * are required.



The form contains the following fields and callouts:

- Species:** Homo sapiens
- Locus*:** HLA-A (Callout: Defines set of alleles over which performed)
- Search For*:** All Alleles (Callout: Defines type of name used in the query)
- Search Using*:** Allele Name (Callout: Defines type of name used in the query)
- Search Option*:** Like (Callout: "Like", "Starts with" and "Exact match")
- Search Text* (Comma delimited):** A*0102, A_0807, 07, 1611N (Callout: Option type of used in the query)
- Results Per Page:** 25 (Callout: Specific alleles used to retrieve alleles)
- Buttons:** Submit, Cancel
- Callout:** Up to 100 results per page and click submit

Note: To see alleles for a locus, please leave the Search Text field blank.

Basic MHC Allele Query Search Fields

Reference Data / MHC Allele Search

[Home](#) | [Genes](#) | [Proteins](#) | [MHC Alleles](#) | [Pathways](#) | [Protein Networks](#) | [SNPs](#) | [ImmPort Gene Lists](#) | [Immunologically Related Genes](#) | [Download](#) | [Data History](#)

See below for MHC Allele Search information.

Fields marked with an asterisk * are required.

Click on the arrow
to go back and make
selections

Choose the query type
from the allele, alignment
of sequence feature

MHC Allele Search - Selected Return Data Type : **Allele**

Please Choose Query Type: 

- Allele
- Alignment
- Sequence Feature

General Criteria:

Species: 

Locus*: 

Allele Criteria:

Search For*  

Search Using*  

Search Option*  

Search Text 
(Comma delimited)

Results per page: 

Basic MHC Allele Query Species and Locus Fields

MHC Allele Query

Fields marked with an asterisk * are required.

Species

Homo sapiens

Species: ImmPort currently supports the human species (*Homo sapiens*). Additional species will be added in the future.

Locus*

HLA-A

Locus: The ANRI curated list of HLA loci from IMGT is available.

HLA-A
HLA-B
HLA-Cw
HLA-DMA
HLA-DMB
HLA-DOA
HLA-DOB
HLA-DPA1
HLA-DPB1
HLA-DQA1
HLA-DQB1
HLA-DRA
HLA-DRB1
HLA-DRB2
HLA-DRB3
HLA-DRB4
HLA-DRB5
HLA-DRB6
HLA-DRB7
HLA-DRB8

Basic MHC Allele Query Search Fields

MHC Allele Query

Fields marked with an asterisk * are required.

Species

Locus*

Search For* 

Search Using* 

Search Option* 

Search Text 
(Comma delimited)

Results Per Page

Homo sapiens

HLA-A

All Alleles

Allele Name

Like

A*0102, A_0807, 07, 1611N

25

Search For: This field is used for allele records for a MHC locus for all alleles, alleles with G-code group code, and all CWD alleles.

Search Using: This field is used to record the allele name, IMGT accession, G-code group code, protein and transcript sequence, CWD allele names that conform to the HLA nomenclature.

Search Option: This field supports either the Starts With or Exact Match option. ... in the search text. For the 'Exact' option, all digits and suffixes in allele names or all digits in IMGT Accessions need to be intact to find the match. For the 'Start with' option, the search returns all matches to a partial input but aligned from the beginning of the name (e.g. if the input is '0101' of HLA-A, it will return A*01010102N and A*01010101 ..., but not A*02010101.

Search Text: This field supports a comma delimited list of allele names (exact or partial) and returns all the matches. The Search function accepts many variants on allele name prefixes including A*, A, HLA-A, HLA_A.

Defines the set of alleles over which the search is performed

Defines type of name used in the query - allele names exact search option for deleted and changed names list.- G-code group search type on group code names with optional g-suffix in search options - Transcript and protein sequence type

This is a string match operator and not blast-based

Enter A*01010102N for specific allele or just A*0101 to retrieve A*01010102N, A*01010101. Blank retrieves all alleles of locus based on Search For

HLA Nomenclature

The HLA allele names are curated by the WHO nomenclature committee (see <http://www.ebi.ac.uk/imgt/hla/nomenclature/index.html> and <http://www.anthonynolan.org.uk/HIG/lists/nomenlist.html>).

The allele names are in the format of

- Gene/locus,
- Asterisk,
- Allele family (the serological antigen),
- Allelic Subtype (Amino acid difference),
- Non-coding (synonymous) polymorphism, intron 3' or 5' polymorphism
- Optional suffix in single letter suffix 'N', 'L', 'S', 'C', 'A' or 'Q'
(N = Null expression, L = Low expression, Aberrant expression S = Secreted, C = Cytoplasm, Q Questionable) .

The IMGT Accession is a sequence ID generated by IMGT (<http://www.ebi.ac.uk/imgt/hla/nomenclature/alignments.html>).

