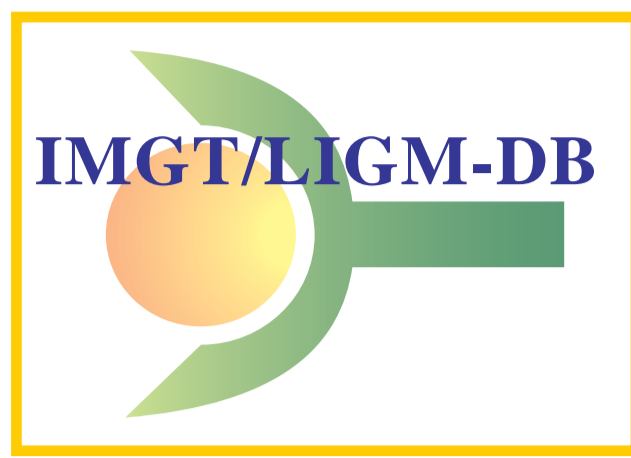


IMGT® databases

Sequences

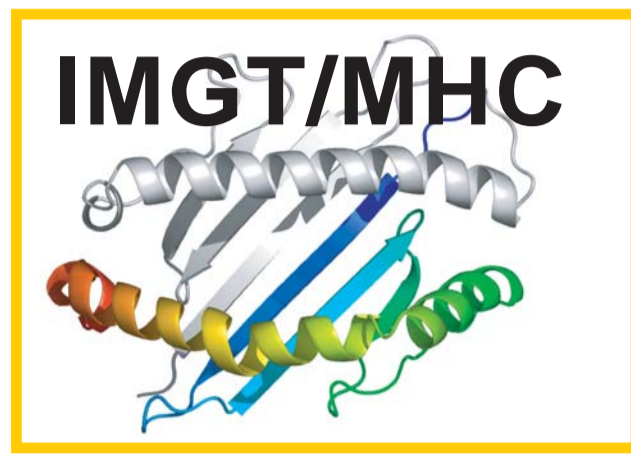


IMGT/LIGM-DB

IG and TR from human and 251 other vertebrate species

LIGM

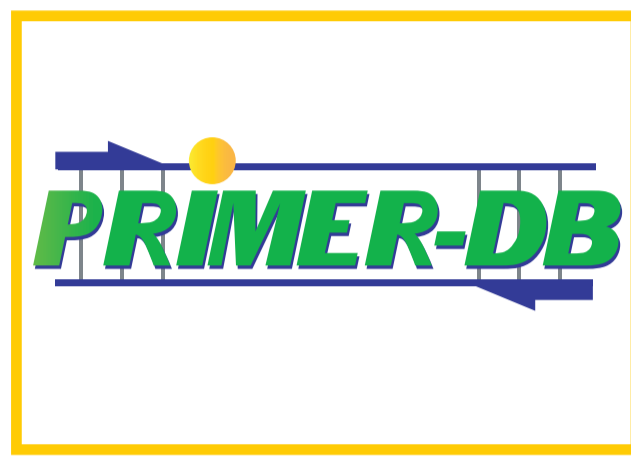
Giudicelli, V. et al.,
Nucleic Acids Res., 34, D781-D784 (2006)



IMGT/MHC-DB

HLA and MHC/NHP
ANRI, BPRC and EBI

Robinson, J. et al.,
Nucleic Acids Res., 31, 311-314 (2003)



IMGT/PRIMER-DB

IG and TR oligonucleotides

LIGM

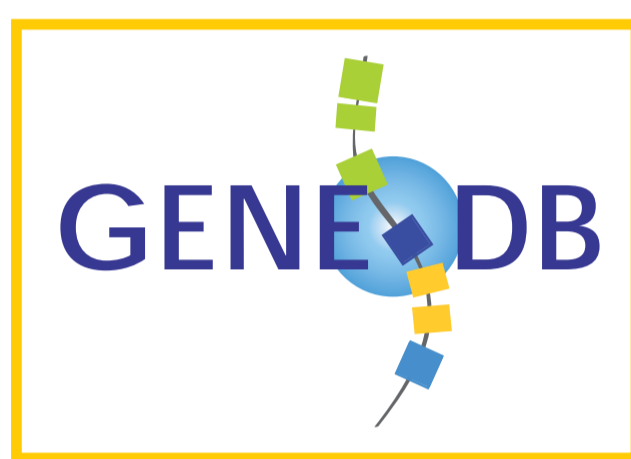
Giudicelli, V. et al.,
Nucleic Acids Res., 34, D781-D784 (2006)

IMGT/LIGM-DB is the IMGT® comprehensive database of immunoglobulin (IG) and T cell receptor (TR) nucleotide sequences from human and other vertebrate species, created in 1989. IMGT/LIGM-DB is the first and the largest database of IMGT®. In July 2010, IMGT/LIGM-DB contained 145 795 sequences from 251 species. IMGT/LIGM-DB includes all germline and rearranged IG and TR genomic DNA (gDNA) and complementary DNA (cDNA). The Web interface allows searches according to immunogenetic specific criteria. The specific annotation of cDNA is performed by IMGT/Automat. The unique source of IMGT/LIGM-DB is the European Molecular Biology Laboratory (EMBL), which shares data with GenBank and DDBJ. IMGT/LIGM-DB data are also distributed by anonymous FTP servers at CINES and the European Bioinformatics Institute (EBI), and from many SRS (Sequence Retrieval System) sites.

IMGT/PRIMER-DB is the IMGT® oligonucleotide database. IMGT/PRIMER-DB provides standardized information on oligonucleotides (or Primers) and combinations of primers (Sets, Couples) for IG and TR. Primers, Sets and Couples are described in IMGT/PRIMER-DB cards. In July 2010, IMGT/PRIMER-DB contained 1 864 entries. These primers are useful for combinatorial library constructions, scFv, phage display or microarray technologies.

IMGT/MHC-DB contains sequences of the major histocompatibility complex (MHC) and comprises IMGT/HLA-DB (for Human Leukocyte Antigen or human MHC) and IMGT/MHC-NHP (for MHC of nonhuman primates), hosted at EBI.

Genome



IMGT/GENE-DB

The international reference for IG and TR gene and allele nomenclature

LIGM

Giudicelli, V. et al., *Nucleic Acids Res.*, 33, D256-D261 (2005)

IMGT/GENE-DB is the IMGT® genome database. IMGT/GENE-DB is the official repository of all the IG and TR genes and alleles approved by the World Health Organization (WHO) /International Union of Immunological Societies (IUIS) Nomenclature Subcommittee for IG and TR. In July 2010, IMGT/GENE-DB contained 2 532 genes IG and TR genes from human, mouse, rat and rabbit, and 3 580 alleles. All the human IMGT® gene names were approved by the HUGO Nomenclature Committee (HGNC) in 1999 and entered in IMGT/GENE-DB and in Entrez Gene at NCBI (USA). The mouse IG and TR gene names with IMGT reference sequences were provided by IMGT® to HGNC and to the Mouse Genome Informatics (MGI) in July 2002. Reciprocal links exist between IMGT/GENE-DB and HGNC and Entrez Gene databases.

IMGT/GENE-DB Query page

GENERAL CRITERIA

Species: Homo sapiens
Locus: IGH locus
Gene type: variable
Group: IGHV
Subgroup: any
Functionality: any
Selection of genes which have been found: any

SHORT CUT : selection on gene or clone name

Species: Homo sapiens AND IGHV gene name (ex: IGHV1-2) IGHV1-2
Selection on clone name: Species: Homo sapiens AND Clone name (1)

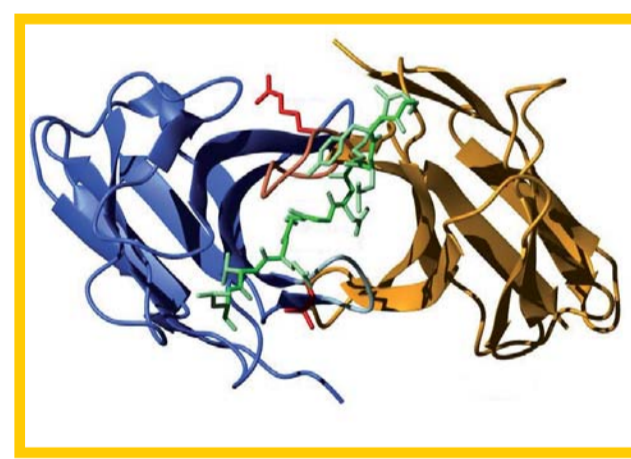
List of resulting genes

Select, in the first column, the genes to view their detailed IMGT gene entry.

Species	IMGT gene name	Gene functionality	IMGT gene definition	Number of alleles	Chromosome	Chromosomal localization	IMGT/LIGM-DB reference sequence(s) for allele *01
<input checked="" type="checkbox"/>	Homo sapiens IGHV1-2	F	Immunoglobulin heavy variable 1-2	4	14	14q32.33	X07448
<input type="checkbox"/>	Homo sapiens IGHV1-24	F	Immunoglobulin heavy variable 1-24	1	14	14q32.33	M99642

IGHV1-2 allele names	Gene functionality	R	T	Pr	IMGT/LIGM-DB reference sequences		
					Clone names	Accession numbers	Molecule type
IGHV1-2*01	F	+	+	+	V35/V1-2b	X07448	gDNA
IGHV1-2*02	F	+			VI-2	X62106	gDNA
IGHV1-2*03	F				1-1	X92208	gDNA
IGHV1-2*04	F	+			DP-8	Z12310	gDNA

2D and 3D structures

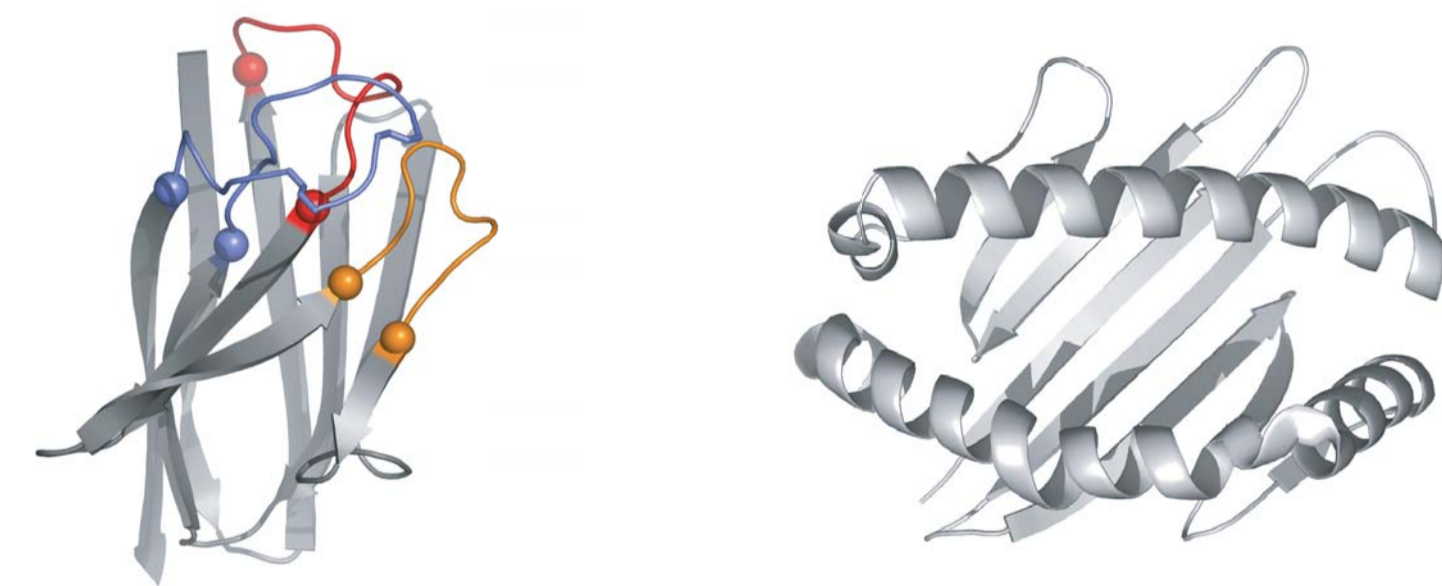


IMGT/3Dstructure-DB

IG, TR, MHC and RPI structures

LIGM

Ehrenmann, F. et al.,
Nucleic Acids Res., 38, D301-D307 (2010)



IMGT/3Dstructure-DB is the IMGT® 3D structure database specialized in immunoglobulins (IG), T cell receptors (TR), major histocompatibility complex (MHC) of human and other vertebrate species, in the immunoglobulin superfamily (IgSF), MHC superfamily (MhcSF) and related proteins of the immune system (RPI) with known 3D structures. In July 2010, IMGT/3Dstructure-DB contained 2 242 atomic coordinate files. These coordinate files extracted from the Protein Data Bank (PDB) are renumbered according to the standardized IMGT unique numbering. The IMGT/3Dstructure-DB cards provide IMGT® annotation on the amino acid sequences, 2D structures (IMGT Colliers de Perles) and 3D structures of IG, TR, MHC and RPI, contact analysis, downloadable IMGT/3Dstructure-DB flat files, visualization tools (Jmol and QuickPDB), and external links.

IMGT Residue@Position cards provide detailed standardized information on the inter- and intra-domain contacts of each residue, based on the IMGT unique numbering.

Monoclonal antibodies

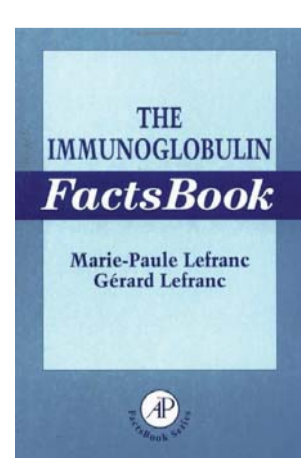


IMGT/mAb-DB

Monoclonal antibodies (IG, mAb) and fusion proteins for immune applications (FPIA)

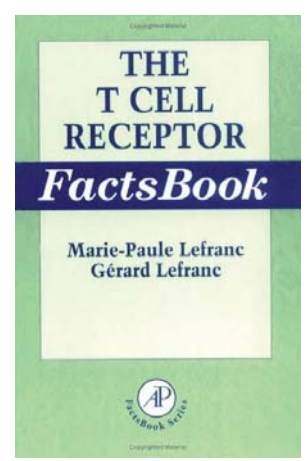
LIGM

IMGT/mAb-DB is the IMGT® monoclonal antibodies (mAb) database. IMGT/mAb-DB provides a unique expertised resource on monoclonal antibodies with clinical indications. Since 2008, amino acid sequences of monoclonal antibodies (IG, mAb) and fusion proteins for immune applications (FPIA) from INN/WHO have been entered in IMGT/2Dstructure-DB, a section of IMGT/3Dstructure-DB.



Books

Lefranc, M.-P. and Lefranc, G.,
The Immunoglobulin FactsBook, Academic Press,
458 pages (2001)



Lefranc, M.-P. and Lefranc, G.,
The T cell receptor FactsBook, Academic Press,
398 pages (2001)

IMGT/LIGM-DB Other accesses

- **ARSA**: DDBJ (DNA Data Bank of Japan)
- **SRS and MRS**: EBI (UK), DKFZ (Heidelberg, Germany), CEINGE (Biotechnologie Avanzate, Naples, Italy), NIAS DNA Bank (Tsukuba, Japan), BEN (Belgian EMBnet Node, Belgium)
- **FTP**: CINES (France), EBI (UK)
- **BLAST and FASTA**: CINES (France), EBI (UK), Institut Pasteur (France)
- **LinkOut** (nucleotide) at NCBI (USA)