IMGT® 21 years !!!

The international ImMunoGeneTics information system®

IMGT founder and director: Marie-Paule Lefranc

Université Montpellier 2 and CNRS, Laboratoire d'ImmunoGénétique Moléculaire (LIGM),
Institut de Génétique Humaine (IGH), UPR CNRS 1142, Montpellier (France)

Im Muno Gene Tics Information system®

http://www.imgt.org

- IMGT®, the international ImMunoGeneTics information system® http://www.imgt.org, is the global reference in immunogenetics and immunoinformatics, created in 1989 by Marie-Paule Lefranc (Université Montpellier 2 and CNRS). IMGT® is a high-quality integrated knowledge resource specialized in the immunoglobulins (IG) or antibodies, T cell receptors (TR), major histocompatibility complex (MHC) of human and other vertebrate species, and in the immunoglobulin superfamily (IgSF), MHC superfamily (MhcSF) and related proteins of the immune system (RPI) of vertebrates and invertebrates.
- IMGT® provides a common access to sequence, genome and structure Immunogenetics data, based on the concepts of IMGT-ONTOLOGY and on the IMGT Scientific chart rules.
- IMGT® works in close collaboration with EBI (Europe), DDBJ (Japan) and NCBI (USA).
- IMGT® consists of sequence databases, genome database, structure database, and monoclonal antibodies database, Web resources and interactive tools.

DATABASES

Sequences

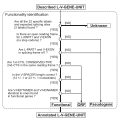
IMGT/LIGM-DB
IG and TR from human and 251 other vertebrate species
LIGM
Giudicelli, V. et al., Nucleic Acids Res., 34, D781-D784 (2006)

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)

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® has developed IMGT/LIGMotif, a tool for IG and TR gene annotation in large genomic sequences. The figure shows the functionality identification module for a described V gene (L-V-GENE-UNIT).
Lane, J. et al., BMC Bioinformatics, 11, 223 (2010)

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)

Monoclonal antibodies

IMGT/mAb-DB
Monoclonal antibodies (IG, mAb) and fusion proteins for immune applications (FPIA)
LIGM

TOOLS

Sequences

IMGT/V-QUEST
LIGM
Brochet, X. et al., Nucleic Acids Res., 36, W503-W508 (2008)

IMGT/JunctionAnalysis
LIGM
Yousfi Monod, M. et al., Bioinformatics, 20, I379-I385 (2004)

IMGT/Allele-Align
LIGM
Lefranc, M.-P., Immunome Res., 1:3 (2005)

IMGT/PhyloGene
LIGM
Elemento, O. and Lefranc, M.-P., Dev. Comp. Immunol., 27, 763-779 (2003)

IMGT/DomainDisplay
LIGM
Lefranc, M.-P. et al., Dev. Comp. Immunol., 29, 917-938 (2005)

Genome

IMGT/LocusView, IMGT/GeneView, IMGT/GeneSearch, IMGT/CloneSearch
LIGM
Lefranc, M.-P., Immunome Res., 1:3 (2005)

IMGT/GeneInfo
TIMC and ICH (Grenoble)
Baum, T.P. et al., BMC Bioinformatics, 7, 224 (2006)

IMGT/GeneFrequency
LIGM
Lefranc, M.-P. et al., In Silico Biology, 5, 45-60 (2005)

2D and 3D structures

IMGT/DomainGapAlign
LIGM
Ehrenmann, F. et al., Nucleic Acids Res., 38, D301-307 (2010)

IMGT/Collier-de-Perles
LIGM
Kaas, Q. et al., Brief. Funct. Genomic Proteomic, 6, 253-264 (2007)

IMGT/DomainSuperimpose
LIGM
Lefranc, M.-P. et al., Nucleic Acids Res., 33, D593-D597 (2005)

IMGT/StructuralQuery
LIGM
Kaas, Q. et al., Nucl. Acids. Res., 32, D208-D210 (2004)

WEB RESOURCES

Sequences

Alignments of alleles

Tables of alleles

Protein displays

Allotypes
Isotypes

Lefranc, M.-P. et al., In Silico Biology, 5, 45-60 (2005)
Lefranc, M.-P., Leukemia, 17, 260-266 (2003)

Genome

Chromosomal localizations

Locus representations

Gene tables

Duroux, P. et al., Biochimie, 90, 570-583 (2008)

2D and 3D structures

IMGT Colliers de Perles

3D representation

FR-IMGT and CDR-IMGT length

Kaas, Q. et al., Brief. Funct. Genomic Proteomic, 6, 253-264 (2007)

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**: EBI (UK), DKFZ (Heidelberg, Germany), CEINGE (Biotecnologie Avanzate, Naples, Italy), NIAS DNA Bank (Tsukuba, Japan)
- **MRS**: 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)

IMGT Other Web resources

IMGT Index
IMGT Scientific chart
IMGT Education
IMGT Medical page
IMGT Veterinary page
IMGT Biotechnology page

Lefranc, M.-P. et al., Nucl. Acids Res., 37, D1006-D1012 (2009)

IMGT® founder and director: Marie-Paule Lefranc (Marie-Paule.Lefranc@igh.cnrs.fr)
Bioinformatics manager: Véronique Giudicelli (Veronique.Giudicelli@igh.cnrs.fr)
Computer manager: Patrice Duroux (Patrice.Duroux@igh.cnrs.fr)
Webmaster: Chantal Ginestoux (Chantal.Ginestoux@igh.cnrs.fr)