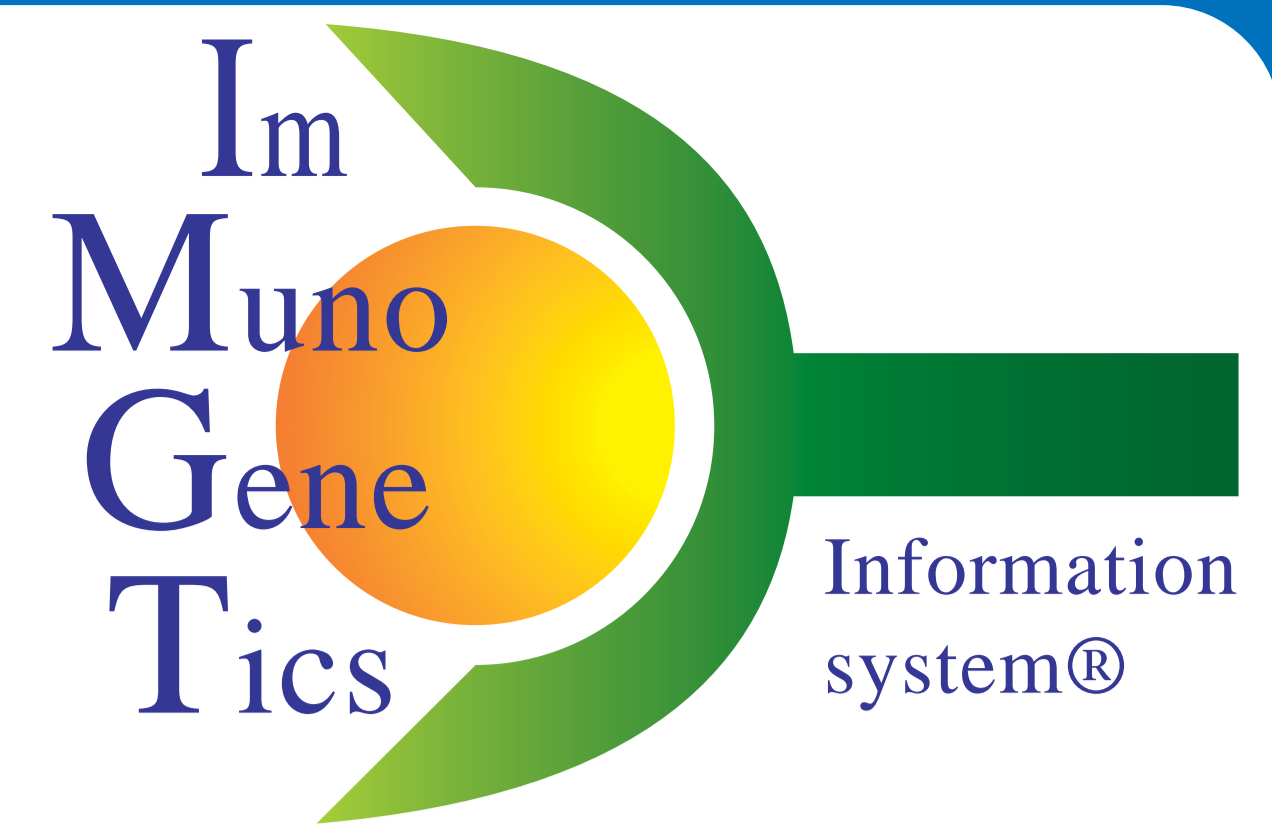


IMGT/mAb-DB: the IMGT® database for therapeutic monoclonal antibodies



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<http://www.imgt.org>

IMGT/mAb-DB is the monoclonal antibodies database of IMGT®, the international ImMunoGeneTics information system® (<http://www.imgt.org>) that is the global reference in immunogenetics and immunoinformatics.

IMGT/mAb-DB provides a unique expertised resource on immunoglobulins (IG) or monoclonal antibodies (mAb) with clinical indications, and on fusion proteins for immune applications (FPIA). IMGT/mAb-DB is a relational database using the open source MySQL (<http://www.mysql.com>) management system database.

Since 2008, amino acid sequences of mAb (suffix -mab) and of FPIA (suffix -cept) from the World Health Organization(WHO)/International Nonproprietary Name (INN) Programme have been entered in IMGT®.

The IMGT/mAb-DB Query page allows requests on several fields. These are organized in 7 sections: (1) IMGT/mAb DB ID, (2) INN and other names, (3) characteristics and structure, (4) specificity (target), (5) origin of the target (antigen or ligand), (6) clinical indication and development status, and (7) clinical domain.

Your query: IMGT/mAb-DB INN = alemtuzumab

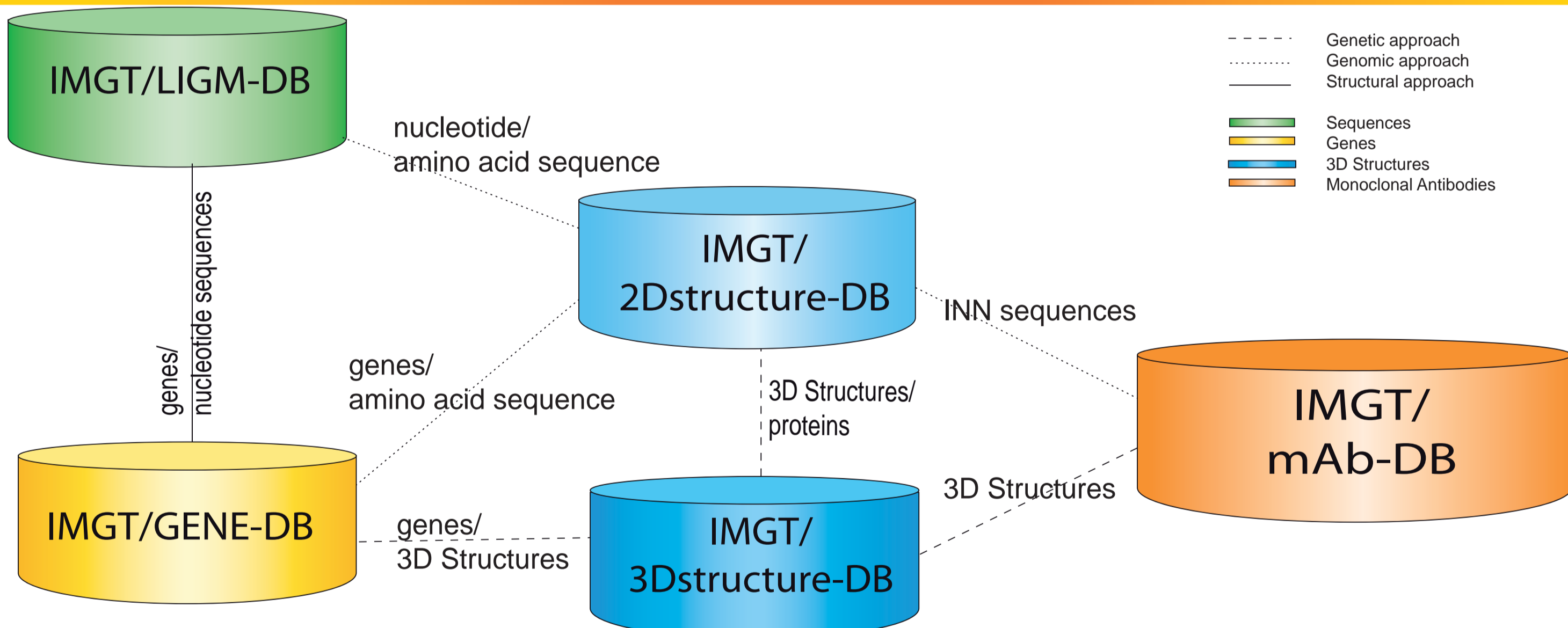
IMGT/mAb-DB ID	INN (International Nonproprietary Name)	INN Num.	INN Prop. list	INN Rec. list	Common name	Proprietary name	IMGT/mAb-DB species	Isotype and format	IMGT/2Dstructure-DB	IMGT/3Dstructure-DB	Specificity (target) [origin]	Origin clone species	Origin clone name	Company	Clinical indication	Development status	Regulatory agency status and year	Application	Clinical domain	FDA / EMA / NCI number or ATC code
11	alemtuzumab	8005	83 (2000)	45 (2001)	Campath-1H, LDP-03	CAMPATH® (US) MABCAMPATH® (EU)	Humanized	IgG1k	8005	1bey 1cel	CD52 [Homo sapiens]	Rattus norvegicus	YTH34.5HL	Berlex Inc. (Wayne NJ USA) (US) / Genzyme Corp. (Cambridge MA USA) (EU) / Millennium Pharmaceuticals Inc. (Cambridge MA USA) (EU/US)	Chronic lymphocytic leukemia (CLL) Kidney transplant rejection Multiple sclerosis (MS)	Phase III Phase III Phase III	FDA approval May 2001	Therapeutic Diagnostic Therapeutic	Hematology, Oncology Immunology Immunology	FDA: (BLA) 103948 NCI: C1681 Drugnum: 702

A query on a name allows to retrieve the International Nonproprietary Name (INN) and INN lists numbers as provided by the World Health Organization (WHO)/INN Programme, the Common name from literature, the Proprietary name if the antibody or fusion protein for immune application (FPIA) is a registered trademark (symbol®).

For each entry, IMGT/mAb-DB provides the origin species (human, rat, murine, humanized or chimeric), the isotype and format, links to IMGT/2Dstructure-DB (amino acid sequences and IMGT Colliers de Perles), links to IMGT/3Dstructure-DB (3D structures), specificity (target), origin clone species and origin clone name.

IMGT/mAb-DB also provides information on company, clinical indication (more than 200 in the database), development status, organization that approved the drug such as Food and Drugs Administration (FDA) or European Medicines Agency (EMA), application (diagnostic or therapeutic) and clinical domain.

IMGT/mAb-DB: Relations with other IMGT® databases



In September 2010, IMGT/mAb-DB contains 343 entries (175 -mab, 15 -cept), 213 have an INN and, among them, 81 have sequences in IMGT/2Dstructure-DB and 14 have 3D structures in IMGT/3Dstructure-DB. By providing links to IMGT/2Dstructure-DB and IMGT/3Dstructure-DB for entries available in these databases, IMGT/mAb-DB facilitates comparative studies of antibodies and FPIA, and of their constitutive chains, even if 3D structures are not yet available.

Link to IMGT/2Dstructure-DB

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

mAbs and FPIA approved for therapeutic and diagnostic use (in 2010)

5 Human mAbs	adalimumab (2002) HUMIRA® / TRUDEXA®	panitumumab (2006) VECTIBIX™	golimumab (2009) SIMPONI™	canakinumab (2009) ILARIS®	ustekinumab (2009) STELARA™						
5 Murine mAbs	muromonab-CD3 (1992) ORTHOCLONE OKT3®	edrecolomab (1995) PANOREX®	ibritumomab tiuxetan (2002) ZEVALIN®	tositumomab (2003) BEXXAR®	capromab* (1996) PROSTASCINT®						
5 Chimeric mAbs	abciximab (1994) REOPRO®	rituximab (1997) MABTHERA® / RITUXAN®	basiliximab (1998) SIMULECT®	infliximab (1998) REMICADE®	cetuximab (2004) ERBITUX®						
11 Humanized mAbs	dacizumab (1997) ZENAPAX®	palivizumab (1998) SYNAGIS®	trastuzumab (1998) HERCEPTIN®	alemtuzumab (2001) CAMPATH® / MABCAMPATH®	omalizumab (2003) XOLAIR®	ranibizumab (2006) LUCENTIS®	scuzumab (2007) SOLIRIS™	natalizumab (2008) TYSABRI®	bevacizumab (2008) AVASTIN®	certolizumab pegol (2008) CIMZIA®	nimoluzumab (2008) THERACIM®
4 FPIA	etanercept (1998) ENBREL®	alefacept (2003) AMEVIVE®	abatacept (2005) ORENCIA®	niloncept (2008) ARCALYST™							

In September 2010, IMGT/mAb-DB contains 30 monoclonal antibodies and FPIA on the market: 29 of them (25 mAb and 4 FPIA) are for therapeutic use and 1, the mAb capromab (shown with *) is for diagnostic use.

Conjugated or radiolabelled mAbs in IMGT/mAb-DB

Monoclonal antibodies can be used:

conjugated with another molecule

- Calicheamicin, a cytotoxic antitumor antibiotic
Ex: gentuzumab ozogamicin, MYLOTARG®
Scientists believe Alexander the Great was killed by calicheamicin, a dangerous compound produced by a bacteria (*Micromonospora echinospora*) found in water. (Squires N., Telegraph, 03 August 2010)
- Exotoxin A from *Pseudomonas Aeruginosa*
Ex: oportuzumab monatox, PROXINIUM™ VICINIUM™
- Monomethyl auristatin E (MMAE), a synthetic antineoplastic agent
Ex: glembatumumab vedotin
- Bouganin, from *Bougainvillea spectabilis* Willd toxin
Ex: citatuzumab bogatox

radiolabelled with an isotope

- Indium-111:
Half-Life 2.80 days, used in nuclear medicine to observe tumors and LCD manufacturing,
Ex: capromab, PROSTASCINT®
- Iodine-131:
Half-Life 8 days, used in nuclear medicine to observe a thyroid gland and radiotherapy on cancers such as lymphoma,
Ex: tositumomab, BEXXAR®

In September 2010, IMGT/mAb-DB contains: 17 INN radiolabelled and 11 INN conjugated.