**Supplementary Table A1** mAbs researched in this work based on targets related with MG and other autoimmune diseases

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| **INN mAbs** | **Target** | **Receptor Identification** | **IMGT MOA\*\*** | **Clinical Indication** | **IMGT variants** | **FDA / EMA approval** |
| eculizumab\* (mAbID [37](https://www.imgt.org/mAb-DB/mAbcard?AbId=37#moa_Immunology)) | C5 | IgG2-G4 - kappa | **Blocking**  *Complement inhibitor* | Dermatomyositis, Nephritis, Paroxysmal nocturnal hemoglobinuria (PNH), Psoriasis, Rheumatoid Arthritis (RA), Atypical hemolytic uremic syndrome (aHUS), Neuromyelitis optica (NMO), Myasthenia Gravis (MG), Kidney transplantation treatment of antibody-mediated rejection (AMR), Kidney transplantation prevention of delayed graft function (DGF) |  | EMA:  October 2003  FDA: March 2007 |
| ravulizumab\*  (mAbID [674](https://www.imgt.org/mAb-DB/mAbcard?AbId=674#moa_Immunology)) | IgG2-G4- kappa | PNH | Atypical hemoltic uremic syndrome |MG | **G4v24** CH3 L107, S114  Half-life extension | EMA: May 216  FDA: December 2018 |
| crovalimab  (mAbID [783](https://www.imgt.org/mAb-DB/mAbcard?AbId=783#moa_Hematology)) | IgG1 - kappa | PNH | **G1v94** CH2 R1.2, R1.1, K3, G110, S115, S116  ADCC and CDC reduction  **G1v100** CH3 R118, E120  decrease Rheumatoid factor (RF) binding Fc variants with enhanced FcRn binding  **G1v85** CH3 L107, A114  half life extensions |  |
| gefurulimab\*,\*\*\*  (mAbID [1253](https://www.imgt.org/mAb-DB/mAbcard?AbId=1253#moa_Immunology)) | VH - VH' | Complement component deficiency | MG |  |  |
| tesidolumab  (mAbID [535](https://www.imgt.org/mAb-DB/mAbcard?AbId=535#moa_Inflammation)) | IgG1 - lambda2 | Age-related macular degeneration (AMD) | Choroiditis | **G1v14** CH2 A1.3, A1.2  ADCC and CDC reduction |  |

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| vilobelimab\*\*\*  (mAbID [1038](https://www.imgt.org/mAb-DB/mAbcard?AbId=1038#moa_Immunology)) |  | IgG4-kappa |  | Hidradenitis suppurativa | Inflammation |  |  |
| olendalizumab  (mAbID [585](https://www.imgt.org/mAb-DB/mAbcard?AbId=585#moa_Immunology)) | IgG2-G4 - kappa | Graft-versus-host disease (GvHD) | Antiphospholipid syndrome (APS) |  |  |
| pozelimab\*  (mAbID [898](https://www.imgt.org/mAb-DB/mAbcard?AbId=898#moa_Immunology)) | IgG4 - kappa | PNH |MG | **G4v5** h P10  Half-IG exchange reduction |  |
| efgartigimod alfa\*  (mAbID [731](https://www.imgt.org/mAb-DB/mAbcard?AbId=731#moa_Immunology)) | FCGRT | Fc - gamma1 | **Neutralizing**  *FcRn inhibitor* | MG | Primary immune thrombocytopenia (ITP) | Chronic inflammatory demyelinating polyneuropathy (CIDP) | **G1v96** CH2 Y15.1, T16, E18; CH3 K113, F114  Half-life extension without pH dependency | FDA:  December 2021 |
| batoclimab\*  (mAbID [943](https://www.imgt.org/mAb-DB/mAbcard?AbId=943#moa_Immunology)) | IgG1 - lambda2 | Autoimmune diseases | MG | **G1v14** CH2 A1.3, A1.2  ADCC and CDC reduction |  |
| rozanolixizumab\*  (mAbID [642](https://www.imgt.org/mAb-DB/mAbcard?AbId=642#moa_Immunology)) | IgG4 - kappa | MG | Thrombocytopenia / Immune thrombocytopenia (ITP) | **G4v5** h P10  Half-IG exchange reduction | FDA:  April 2018 |
| nipocalimab\*  (mAbID [1020](https://www.imgt.org/mAb-DB/mAbcard?AbId=1020#moa_Immunology)) | IgG1 - lambda3 | Autoimmune diseases | MG | **G1v29** CH2 A84.4  No N-glycosylation site ADCC reduction |  |
| orilanolimab  (mAbID [854](https://www.imgt.org/mAb-DB/mAbcard?AbId=854#moa_Immunology)) | IgG4 - kappa | Autoimmune diseases |  Pemphigus vulgaris (PV) |  Warm antibody autoimmune hemolytic anemia | **G4v5** h P10  Half-IG exchange reduction |  |
| iscalimab\*,\*\*\*  (mAbID [799](https://www.imgt.org/mAb-DB/mAbcard?AbId=799#moa_Immunology)) | CD40 | IgG1-kappa | **Blocking**  *Immunosuppressant* | Psoriasis | Kindey transplant rejection | MG | Sjögren's syndrome (SjS) | Graves' orbitopathy (GO) | **G1v29** CH2 A84.4  No N-glycosylation site ADCC reduction |  |
| bleselumab  (mAbID [563](https://www.imgt.org/mAb-DB/mAbcard?AbId=563#moa_Immunology)) | IgG4 - kappa | Psoriasis | Organ transplant immunological rejection suppression | **G4v5** h P10  Half-IG exchange reduction  **G4v3** CH2 E1.2  ADCC and CDC reduction |  |
| ravagalimab  (mAbID [806](https://www.imgt.org/mAb-DB/mAbcard?AbId=806#moa_Immunology)) | IgG1-kappa | Crohn's disease (CD) | **G1v14** CH2 A1.3, A1.2  ADCC and CDC reduction  **G1v42** CH2 Q14; CH3 L107  Half-life extension |  |
| inebilizumab\*,\*\*\*  (mAbID [553](https://www.imgt.org/mAb-DB/mAbcard?AbId=553#moa_Immunology)) | CD19 | IgG1-kappa | **Blocking**  *Immunosuppressant, Fc-effector function* | MG | Multiple sclerosis (MS) | NMO | MG  Scleroderma |  Neuromyelitis optica spectum disorder |  Chronic lymphocytic leukemia (CLL) |  Lymphoma diffuse large B cell (DLBCL) |  | FDA:  February 2016 |
| obexelimab  (mAbID [518](https://www.imgt.org/mAb-DB/mAbcard?AbId=518#moa_Immunology)) | IgG1-kappa | Autoimmune diseases |  RA | Systemic lupus erythematosus (SLE) |  IgG4-related disease (IgG4-RD) | **G1v25** CH2 E29, F113  B cell inhibition |  |
| rituximab\*  (mAbID [161](https://www.imgt.org/mAb-DB/mAbcard?AbId=161#moa_Immunology)) | MS4A1 (CD20) | IgG1 - kappa | **Blocking**  *Immunosuppressant, Fc-effector function* | CLL (CD20-positive, in combination with fludaraline and cyclophosphamide (FC)) |  Solid organ transplantation |  RA | MG  DLBCL (in combination with hyaluronidase) |  Wegener's Granulomatosis (WG) and Microscopic Polygamiitis (MPA), in combination with glucocorticoids |  Non-Hodgkin's lymphoma (NHL), follicular CD20 positive, relapsed or refractory low grade | PV |  Chronic focal encephalitis (CFE) | Waldenstrom macroglobulinemia (WM) |  | E EMA:  June 1998  FDA:  November 1997 |
| ofatumumab\*  (mAbID [194](https://www.imgt.org/mAb-DB/mAbcard?AbId=194#moa_Immunology)) | IgG1 – kappa | CLL | NHL | RA | MS (relapsing remitting) |  Lymphoma follicular (LF) | NMO | PV | MG |  | EMA:  April 2010 (withdrawn)  FDA:  October 2009 |
| ublituximab  (mAbID [372](https://www.imgt.org/mAb-DB/mAbcard?AbId=372#moa_Immunology)) | IgG1 – kappa | CLL | DLBCL | NMO | MS, relapsing-remitting |  | FDA:  August 2016 |
| ocrelizumab  (mAbID [227](https://www.imgt.org/mAb-DB/mAbcard?AbId=227#moa_Immunology)) | IgG1 – kappa | RA | SLE | MS |  Lupus Nephritis |  Primary progressive multiple sclerosis (PPMS) |  | FDA:  March 2017 |
| divozilimab  (mAbID [1060](https://www.imgt.org/mAb-DB/mAbcard?AbId=1060#moa_Immunology)) | IgG1 – kappa | MS, relapsing-remitting | Systemic Scleroderma | NMOSD |  |  |
| tocilizumab\*  (mAbID [96](https://www.imgt.org/mAb-DB/mAbcard?AbId=96#moa_Immunology)) | IL6R | IgG1-kappa | **Blocking**  *Immunosuppressant* | Lymphoproliferative disorder giant lymph node hyperplasia (Castleman's disease) | Multiple myeloma (MM) | RA | Systemic juvenile idiopathic arthritis (SJIA) | Systemic sclerosis |  Cytokine Release Syndrome (CRS) | NMO | Large-vessel vasculitis |  Giant cell arteritis |  Polyarticular Juvenile Idiopathic Arthritis (PJIA) | Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection (COVID-19) | MG |  | EMA:  January 2009  FDA:  January 2010 |
| satralizumab  (mAbID [586](https://www.imgt.org/mAb-DB/mAbcard?AbId=586#moa_Immunology)) | IgG2 - kappa | NMO |  | EMA:  June 2016  FDA:  August 2020 |
| levilimab\*\*\*  (mAbID [887](https://www.imgt.org/mAb-DB/mAbcard?AbId=887#moa_Immunology)) | IgG1 – kappa | RA | **G1v76** CH2 P1.4, V1.3, A1.2  ADCC and CDC reduction  **G1v21** CH2 Y15.1, T16, E18  Half-life extension |  |
| sarilumab  (mAbID [400](https://www.imgt.org/mAb-DB/mAbcard?AbId=400#moa_Immunology)) | IgG1 - kappa | RA | Ankylosing spondylitis (AS) | Uveitis  Polymyalgia Rheumatica (PMR) |  | FDA:  May 2017 |
| vobarilizumab  (mAbID [523](https://www.imgt.org/mAb-DB/mAbcard?AbId=523#moa_Immunology)) | VH - VH' | RA | SLE |  Inflammatory conditions |  |  |
| clazakizumab  (mAbID [414](https://www.imgt.org/mAb-DB/mAbcard?AbId=414#moa_Immunology)) | IL6 | IgG1 - kappa | **Blocking**  *Immunosuppressant* | CD | RA | Psoriatic arthritis (PSA) | AMR | Cancers,lung | **G1v29** CH2 A84.4  No-glycosylation site ADCC reduction | FDA:  August 2019 |
| olokizumab\*\*\*  (mAbID [353](https://www.imgt.org/mAb-DB/mAbcard?AbId=353#moa_Immunology)) | IgG4 - kappa | Autoimmune diseases | CD | RA | **G4v5** h P10  Half-IG exchange reduction |  |
| siltuximab  (mAbID [297](https://www.imgt.org/mAb-DB/mAbcard?AbId=297#moa_Immunology)) | IgG1 - kappa | MM | Multicentric Castleman's disease (MCD) | Renal cell carcinoma (RCC) | Neoplasms |  | EMA:  May 2014  FDA:  April 2014 |
| sirukumab\*\*\*  (mAbID [384](https://www.imgt.org/mAb-DB/mAbcard?AbId=384#moa_Immunology)) | IgG1 - kappa | RA (Despite Methotrexate Therapy) |  Lupus nephritis | Juvenile Idiopathic Arthitis (JIA), pediatric | Giant cell arteritis | PMR |  | FDA:  July 2017 |
| ziltivekimab\*\*\*  (mAbID [979](https://www.imgt.org/mAb-DB/mAbcard?AbId=979#moa_Hematology)) | IgG1 – kappa | Anemia | **G1v21** CH2 Y15.1, T16, E18  Half-life extension |  |
| mezagitamab\*  (mAbID [882](https://www.imgt.org/mAb-DB/mAbcard?AbId=882#moa_Immunology)) | CD38 | IgG1 - lambda | **Blocking**  *Immunosuppressant, Fc-effector function* | MM | SLE | MG |  | FDA:  January 2019 |
| daratumumab\*  (mAbID [301](https://www.imgt.org/mAb-DB/mAbcard?AbId=301#moa_Immunology)) | IgG1 – kappa | MM | AL amyloidosis |Myeloma, multiple (MM), recurrent or refractory (in combination with lenalidomide and dexamethasone or bortezomib and dexamethasone) |  | FDA:  November 2015 |
| felzartamab  (mAbID [1011](https://www.imgt.org/mAb-DB/mAbcard?AbId=1011#moa_Immunology)) | IgG1 - lambda2 | MM |  |  |
| isatuximab  (mAbID [539](https://www.imgt.org/mAb-DB/mAbcard?AbId=539#moa_Immunology)) | IgG1 - kappa | MM | Hematologic malignancies |  | FDA:  May 2014 |