**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 2003FDA: 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, S114Half-life extension | EMA: May 216FDA: 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, S116ADCC and CDC reduction**G1v100** CH3 R118, E120decrease Rheumatoid factor (RF) binding Fc variants with enhanced FcRn binding**G1v85** CH3 L107, A114half 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, A1.2ADCC 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 P10Half-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, F114Half-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, A1.2ADCC 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 P10Half-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 A84.4No 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 P10Half-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 A84.4No 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 P10Half-IG exchange reduction**G4v3** CH2 E1.2ADCC 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 L107Half-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 | MGScleroderma |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, F113B 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 | MGDLBCL (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 1998FDA: 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 2009FDA: January 2010 |
| satralizumab(mAbID [586](https://www.imgt.org/mAb-DB/mAbcard?AbId=586#moa_Immunology)) | IgG2 - kappa | NMO |  | EMA: June 2016FDA: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, E18Half-life extension |  |
| sarilumab(mAbID [400](https://www.imgt.org/mAb-DB/mAbcard?AbId=400#moa_Immunology)) | IgG1 - kappa | RA | Ankylosing spondylitis (AS) | UveitisPolymyalgia 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 A84.4No-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 P10Half-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 2014FDA: 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, E18Half-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 |