

We claim:

1. An isolated antigen-binding protein or antigen-binding fragment thereof that specifically binds to interleukin-2 receptor gamma (IL2R γ), wherein the antigen-binding protein or antigen-binding fragment thereof comprises a heavy chain variable region (HCVR) comprising three heavy chain complementarity determining regions (CDR-H1, CDR-H2, and CDR-H3) and a light chain variable region (LCVR) comprising three light chain complementarity determining regions (CDR-L1, CDR-L2, and CDR-L3), wherein CDR-H1 comprises the amino acid sequence of SEQ ID NO: 347, CDR-H2 comprises the amino acid sequence of SEQ ID NO: 349, CDR-H3 comprises the amino acid sequence of SEQ ID NO: 351, CDR-L1 comprises the amino acid sequence set forth in SEQ ID NO: 72, CDR-L2 comprises the amino acid sequence of SEQ ID NO: 54, and CDR-L3 comprises the amino acid sequence of SEQ ID NO: 355.
2. The antigen-binding protein or antigen-binding fragment thereof of claim 1, which is an antibody.
3. The antigen-binding protein or antigen-binding fragment thereof of claim 2, wherein the antibody is a human antibody.
4. The antigen-binding protein or antigen-binding fragment thereof of claim 1, which is an antigen-binding fragment of an antibody.
5. The antigen-binding protein or antigen-binding fragment thereof of any one of claims 1-4, wherein the HCVR comprises the amino acid sequence of SEQ ID NO: 345 and/or the LCVR comprises the amino acid sequence of SEQ ID NO: 353.
6. The antigen-binding protein or antigen-binding fragment thereof of any one of claims 1-5, wherein the HCVR comprises the amino acid sequence of SEQ ID NO: 345 and the LCVR comprises the amino acid sequence of SEQ ID NO: 353.
7. The antigen-binding protein or antigen-binding fragment thereof of any one of claims 1-6, comprising a heavy chain comprising the amino acid sequence of SEQ ID NO: 357; and/or a light chain comprising the amino acid sequence of SEQ ID NO: 359.

8. The antigen-binding protein or antigen-binding fragment thereof of any one of claims 1-7, comprising a heavy chain comprising the amino acid sequence of SEQ ID NO: 357 and a light chain comprising the amino acid sequence of SEQ ID NO: 359.
9. The antigen-binding protein or antigen-binding fragment thereof of any one of claims 1-4, wherein the HCVR comprises an amino acid sequence having at least 90% sequence identity to the amino acid sequence of SEQ ID NO: 345; and/or the LCVR comprises an amino acid sequence having at least 90% sequence identity to the amino acid sequence of SEQ ID NO: 353.
10. The antigen-binding protein or antigen-binding fragment thereof of any one of claims 1-4, comprising a heavy chain comprising an amino acid sequence having at least 90% sequence identity to the amino acid sequence of SEQ ID NO: 357; and/or a light chain comprising an amino acid sequence having at least 90% sequence identity to the amino acid sequence of SEQ ID NO: 359.
11. The antigen-binding protein or antigen-binding fragment thereof of any one of claims 1-10 which is multispecific.
12. A complex comprising the antigen-binding protein or antigen-binding fragment thereof of any one of claims 1-11 bound to an IL2R γ polypeptide.
13. A method for making the antigen-binding protein or antigen-binding fragment thereof of any one of claims 1-11, comprising:
 - (a) introducing one or more polynucleotides encoding the HCVR and/or the LCVR of the antigen-binding protein or antigen-binding fragment thereof into a host cell;
 - (b) culturing the host cell under conditions favorable to expression of the polynucleotide; and
 - (c) optionally, isolating the antigen-binding protein or antigen-binding fragment thereof from the host cell and/or medium in which the host cell is grown.
14. The method of claim 13 wherein the host cell is a Chinese hamster ovary cell.
15. An antigen-binding protein or antigen-binding fragment thereof which is a product of the method of any one of claims 13-14.

16. A polynucleotide encoding the antigen-binding protein or antigen-binding fragment thereof of any one of claims 1-11.
17. A vector comprising the polynucleotide of claim 16.
18. A host cell comprising the antigen-binding protein or antigen-binding fragment thereof of any one of claims 1-11 and 15.
19. A composition comprising the antigen-binding protein or antigen-binding fragment thereof of any one of claims 1-11 and 15, optionally in combination with a further therapeutic agent.
20. A pharmaceutical formulation comprising the antigen-binding protein or antigen-binding fragment thereof of any one of claims 1-11 and 15 and a pharmaceutically acceptable carrier or excipient and, optionally, a further therapeutic agent.
21. The composition or formulation of any one of claims 19-20 in combination with a further therapeutic agent which is an anti-inflammatory agent.
22. The composition or formulation of any one of claims 19-20 in combination with a further therapeutic agent which is one or more members selected from the group consisting of an anti-TNF α antibody or binding protein, infliximab, adalimumab, etanercept, golimumab, a corticoid, prednisolone, methylprednisolone, antithymocyte globulin, alemtuzumab, daclizumab, tacrolimus, cyclosporine, extracorporeal photophoresis, mycophenolate mofetil, sirolimus, pentostatin, mesenchymal stem cells, inolimomab, denileukin and basiliximab.
23. A vessel or injection device comprising the antigen-binding protein or composition or formulation of any one of claims 1-11, 15, and 19-22.
24. The antigen-binding protein or antigen-binding fragment thereof of any one of claims 1-11 and 15 or the composition or formulation of any one of claims 19-22 for treating or preventing an IL2R γ -mediated disease or condition in a subject in need thereof, wherein the IL2R γ -mediated disease or condition is graft versus host disease, organ transplant rejection, b-islet cell graft rejection, skin transplant rejection, heart transplant rejection, lung transplant rejection, kidney transplant rejection, liver transplant rejection, birdshot chorioretinopathy, multiple sclerosis, uveitis, an autoimmune

disease, Type I diabetes, multiple sclerosis, rheumatoid arthritis, systemic lupus erythematosus, myasthenia gravis, aplastic anemia, atopic dermatitis, asthma, a mast cell activation disorder, mast cell activation syndrome (MCAS), and/or systemic mastocytosis (SM), and said antigen-binding protein or antigen-binding fragment thereof or the composition or formulation is to be injected into the body of the subject.

25. The antigen-binding protein or antigen-binding fragment thereof of claim 24, wherein the antigen-binding protein or antigen-binding fragment thereof is to be administered subcutaneously, intravenously or intramuscularly.

26. The antigen-binding protein or antigen-binding fragment thereof of any one of claims 1-11 and 15 or the composition or formulation of any one of claims 19-22 for use in treating or preventing an IL2R γ -mediated disease or condition, wherein the IL2R γ -mediated disease or condition is graft versus host disease, organ transplant rejection, b-islet cell graft rejection, skin transplant rejection, heart transplant rejection, lung transplant rejection, kidney transplant rejection, liver transplant rejection, birdshot chorioretinopathy, multiple sclerosis, uveitis, an autoimmune disease, Type I diabetes, multiple sclerosis, rheumatoid arthritis, systemic lupus erythematosus, myasthenia gravis, aplastic anemia, atopic dermatitis, asthma, a mast cell activation disorder, mast cell activation syndrome (MCAS), and/or systemic mastocytosis (SM).

27. The antigen-binding protein or antigen-binding fragment thereof of claim 26, wherein

- STAT phosphorylation is blocked in a peripheral blood mononuclear cell induced by a cytokine;
- STAT phosphorylation is blocked in a mast cell induced by a cytokine;
- Serum levels of interferon-gamma, tumor necrosis factor-alpha, IL-6, IL-8, IL-10 and/or mKC/GRO are reduced;
- JAK-STAT-mediated intracellular signaling is blocked, induced by a cytokine in the ILR γ family; and/or
- the serum levels of CD45+ immune cells, NK cells, T-cells and/or B-cells are reduced, in the subject.