**WHAT IS CLAIMED IS:**

1. An anti-IL-36R antibody or antigen-binding fragment thereof, comprising heavy chain complementary determining region 1 (HCDR1), HCDR2 and HCDR3, wherein

the HCDR1 comprises an amino acid sequence of $DYYX_1X_2$ (SEQ ID NO: 191), SEQ ID NO: 19, 33, 48, 64, 79, 94, 109, 124 or 139;

the HCDR2 comprises an amino acid sequence of $LIRNKAAGYTIYYX_3X_4X_5VKG$ (SEQ ID NO: 192), SEQ ID NO: 20, 34, 49, 65, 80, 95, 110, 125 or 140; and

the HCDR3 comprises an amino acid sequence of SEQ ID NO: 5, 21, 35, 50, 66, 81, 96, 111, 126 or 141;

wherein, $X_1$ is M or L; $X_2$ is N, H, S or R; $X_3$ is S or A; $X_4$ is A or D; $X_5$ is S or P.

2. An anti-IL-36R antibody or antigen-binding fragment thereof, comprising light chain complementary determining region 1 (LCDR1), LCDR2 and LCDR3, wherein

the LCDR1 comprises an amino acid sequence of $RASX_{18}NINIWLS$ (SEQ ID NO: 193), SEQ ID NO: 22, 36, 51, 67, 82, 97, 112, 127 or 142;

the LCDR2 comprises an amino acid sequence of SEQ ID NO: 7, 23, 37, 52, 68, 83, 98, 113, 128 or 113; and

the LCDR3 comprises an amino acid sequence of $X_{19}QSQSYPLT$ (SEQ ID NO: 194), SEQ ID NO: 24, 38, 53, 69, 84, 99, 114, 129 or 143;

wherein, $X_{18}$ is Q or R; $X_{19}$ is Q or L.

3. An anti-IL-36R antibody or antigen-binding fragment thereof, comprising heavy chain complementary determining region 1 (HCDR1), HCDR2 and HCDR3, and/or light chain complementary determining region 1 (LCDR1), LCDR2 and LCDR3, wherein

(a) the HCDR1 comprises an amino acid sequence of DYY$X_1X_2$ (SEQ ID NO: 191),

the HCDR2 comprises an amino acid sequence of LIRNKAAGYTIYY $X_3X_4X_5$VKG (SEQ ID NO: 192),

the HCDR3 comprises an amino acid sequence of SEQ ID NO: 5,

the LCDR1 comprises an amino acid sequence of RAS$X_{18}$NINIWLS (SEQ ID NO: 193),

the LCDR2 comprises an amino acid sequence of SEQ ID NO: 7, and

the LCDR3 comprises an amino acid sequence of $X_{19}$QSQSYPLT (SEQ ID NO: 194),

wherein, $X_1$ is M or L; $X_2$ is N, H, S or R; $X_3$ is S or A; $X_4$ is A or D; $X_5$ is S or P; $X_{18}$ is Q or R; $X_{19}$ is Q or L;

(b) the HCDR1 comprises an amino acid sequence of SEQ ID NO: 19,

the HCDR2 comprises an amino acid sequence of SEQ ID NO: 20,

the HCDR3 comprises an amino acid sequence of SEQ ID NO: 21,

the LCDR1 comprises an amino acid sequence of SEQ ID NO: 22,

the LCDR2 comprises an amino acid sequence of SEQ ID NO: 23, and

the LCDR3 comprises an amino acid sequence of SEQ ID NO: 24;

(c) the HCDR1 comprises an amino acid sequence of SEQ ID NO: 33,

the HCDR2 comprises an amino acid sequence of SEQ ID NO: 34,

the HCDR3 comprises an amino acid sequence of SEQ ID NO: 35,

the LCDR1 comprises an amino acid sequence of SEQ ID NO: 36,

the LCDR2 comprises an amino acid sequence of SEQ ID NO: 37, and

the LCDR3 comprises an amino acid sequence of SEQ ID NO: 38;

(d) the HCDR1 comprises an amino acid sequence of SEQ ID NO: 48,

the HCDR2 comprises an amino acid sequence of SEQ ID NO: 49,

the HCDR3 comprises an amino acid sequence of SEQ ID NO: 50,

the LCDR1 comprises an amino acid sequence of SEQ ID NO: 51,

the LCDR2 comprises an amino acid sequence of SEQ ID NO: 52, and

the LCDR3 comprises an amino acid sequence of SEQ ID NO: 53;

(e) the HCDR1 comprises an amino acid sequence of SEQ ID NO: 64,
the HCDR2 comprises an amino acid sequence of SEQ ID NO: 65,
the HCDR3 comprises an amino acid sequence of SEQ ID NO: 66,
the LCDR1 comprises an amino acid sequence of SEQ ID NO: 67,
the LCDR2 comprises an amino acid sequence of SEQ ID NO: 68, and
the LCDR3 comprises an amino acid sequence of SEQ ID NO: 69;

(f) the HCDR1 comprises an amino acid sequence of SEQ ID NO: 79,
the HCDR2 comprises an amino acid sequence of SEQ ID NO: 80,
the HCDR3 comprises an amino acid sequence of SEQ ID NO: 81,
the LCDR1 comprises an amino acid sequence of SEQ ID NO: 82,
the LCDR2 comprises an amino acid sequence of SEQ ID NO: 83, and
the LCDR3 comprises an amino acid sequence of SEQ ID NO: 84;

(g) the HCDR1 comprises an amino acid sequence of SEQ ID NO: 94,
the HCDR2 comprises an amino acid sequence of SEQ ID NO: 95,
the HCDR3 comprises an amino acid sequence of SEQ ID NO: 96,
the LCDR1 comprises an amino acid sequence of SEQ ID NO: 97,
the LCDR2 comprises an amino acid sequence of SEQ ID NO: 98, and
the LCDR3 comprises an amino acid sequence of SEQ ID NO: 99;

(h) the HCDR1 comprises an amino acid sequence of SEQ ID NO: 109,
the HCDR2 comprises an amino acid sequence of SEQ ID NO: 110,
the HCDR3 comprises an amino acid sequence of SEQ ID NO: 111,
the LCDR1 comprises an amino acid sequence of SEQ ID NO: 112,
the LCDR2 comprises an amino acid sequence of SEQ ID NO: 113, and
the LCDR3 comprises an amino acid sequence of SEQ ID NO: 114;

(i) the HCDR1 comprises an amino acid sequence of SEQ ID NO: 124,
the HCDR2 comprises an amino acid sequence of SEQ ID NO: 125,
the HCDR3 comprises an amino acid sequence of SEQ ID NO: 126,
the LCDR1 comprises an amino acid sequence of SEQ ID NO: 127,
the LCDR2 comprises an amino acid sequence of SEQ ID NO: 128, and
the LCDR3 comprises an amino acid sequence of SEQ ID NO: 129; or

(j) the HCDR1 comprises an amino acid sequence of SEQ ID NO: 139,

the HCDR2 comprises an amino acid sequence of SEQ ID NO: 140,

the HCDR3 comprises an amino acid sequence of SEQ ID NO: 141,

the LCDR1 comprises an amino acid sequence of SEQ ID NO: 142,

the LCDR2 comprises an amino acid sequence of SEQ ID NO: 113, and

the LCDR3 comprises an amino acid sequence of SEQ ID NO: 143.

4. The antibody or antigen-binding fragment thereof of claim 1, wherein

the HCDR1 comprises an amino acid sequence of SEQ ID NO: 3, 180, 184 or 188,

the HCDR2 comprises an amino acid sequence of SEQ ID NO: 4, 151, 164 or 173,

the HCDR3 comprises an amino acid sequence of SEQ ID NO: 5,

the LCDR1 comprises an amino acid sequence of SEQ ID NO: 6 or 152,

the LCDR2 comprises an amino acid sequence of SEQ ID NO: 7, and

the LCDR3 comprises an amino acid sequence of SEQ ID NO: 8 or 153.

5. The antibody or antigen-binding fragment thereof of claim 1, wherein

(a) the HCDR1 comprises an amino acid sequence of SEQ ID NO: 3; the HCDR2 comprises an amino acid sequence of SEQ ID NO: 4; the HCDR3 comprises an amino acid sequence of SEQ ID NO: 5; the LCDR1 comprises an amino acid sequence of SEQ ID NO: 6; the LCDR2 comprises an amino acid sequence of SEQ ID NO: 7; and the LCDR3 comprises an amino acid sequence of SEQ ID NO: 8;

(b) the HCDR1 comprises an amino acid sequence of SEQ ID NO: 3; the HCDR2 comprises an amino acid sequence of SEQ ID NO: 151; the HCDR3 comprises an amino acid sequence of SEQ ID NO: 5; the LCDR1 comprises an amino acid sequence of SEQ ID NO: 152; the LCDR2 comprises an amino acid sequence of SEQ ID NO: 7; and the LCDR3 comprises an amino acid sequence of SEQ ID NO: 153;

(c) the HCDR1 comprises an amino acid sequence of SEQ ID NO: 3; the HCDR2 comprises an amino acid sequence of SEQ ID NO: 164; the HCDR3 comprises an amino acid sequence of SEQ ID NO: 5; the LCDR1 comprises an amino acid sequence of SEQ ID NO: 6; the LCDR2 comprises an amino acid sequence of SEQ ID NO: 7; and the LCDR3 comprises an amino acid sequence of SEQ ID NO: 153;

(d) the HCDR1 comprises an amino acid sequence of SEQ ID NO: 3; the HCDR2 comprises an amino acid sequence of SEQ ID NO: 173; the HCDR3 comprises an amino acid sequence of SEQ ID NO: 5; the LCDR1 comprises an amino acid sequence of SEQ ID NO: 6; the LCDR2 comprises an amino acid sequence of SEQ ID NO: 7; and the LCDR3 comprises an amino acid sequence of SEQ ID NO: 153;

(e) the HCDR1 comprises an amino acid sequence of SEQ ID NO: 3; the HCDR2 comprises an amino acid sequence of SEQ ID NO: 151; the HCDR3 comprises an amino acid sequence of SEQ ID NO: 5; the LCDR1 comprises an amino acid sequence of SEQ ID NO: 6; the LCDR2 comprises an amino acid sequence of SEQ ID NO: 7; and the LCDR3 comprises an amino acid sequence of SEQ ID NO: 153;

(f) the HCDR1 comprises an amino acid sequence of SEQ ID NO: 180; the HCDR2 comprises an amino acid sequence of SEQ ID NO: 151; the HCDR3 comprises an amino acid sequence of SEQ ID NO: 5; the LCDR1 comprises an amino acid sequence of SEQ ID NO: 152; the LCDR2 comprises an amino acid sequence of SEQ ID NO: 7; and the LCDR3 comprises an amino acid sequence of SEQ ID NO: 153;

(g) the HCDR1 comprises an amino acid sequence of SEQ ID NO: 3; the HCDR2 comprises an amino acid sequence of SEQ ID NO: 151; the HCDR3 comprises an amino acid sequence of SEQ ID NO: 5; the LCDR1 comprises an amino acid sequence of SEQ ID NO: 152; the LCDR2 comprises an amino acid sequence of SEQ ID NO: 7; and the LCDR3 comprises an amino acid sequence of SEQ ID NO: 153;

(h) the HCDR1 comprises an amino acid sequence of SEQ ID NO: 184; the HCDR2 comprises an amino acid sequence of SEQ ID NO: 151; the HCDR3 comprises an amino acid sequence of SEQ ID NO: 5; the LCDR1 comprises an amino acid sequence of SEQ ID NO: 152; the LCDR2 comprises an amino acid sequence of SEQ ID NO: 7; and the LCDR3 comprises an amino acid sequence of SEQ ID NO: 153;

(i) the HCDR1 comprises an amino acid sequence of SEQ ID NO: 3; the HCDR2 comprises an amino acid sequence of SEQ ID NO: 151; the HCDR3 comprises an amino acid sequence of SEQ ID NO: 5; the LCDR1 comprises an amino acid sequence of SEQ ID NO: 152; the LCDR2 comprises an amino acid sequence of SEQ ID NO: 7; and the LCDR3 comprises an amino acid sequence of SEQ ID NO: 153;

(j) the HCDR1 comprises an amino acid sequence of SEQ ID NO: 188; the HCDR2 comprises an amino acid sequence of SEQ ID NO: 151; the HCDR3 comprises an amino acid sequence of SEQ ID NO: 5; the LCDR1 comprises an amino acid sequence of SEQ ID NO: 152; the LCDR2 comprises an amino acid sequence of SEQ ID NO: 7; and the LCDR3 comprises an amino acid sequence of SEQ ID NO: 153; or

(k) the HCDR1 comprises an amino acid sequence of SEQ ID NO: 3; the HCDR2 comprises an amino acid sequence of SEQ ID NO: 151; the HCDR3 comprises an amino acid sequence of SEQ ID NO: 5; the LCDR1 comprises an amino acid sequence of SEQ ID NO: 152; the LCDR2 comprises an amino acid sequence of SEQ ID NO: 7; and the LCDR3 comprises an amino acid sequence of SEQ ID NO: 153.

6. The antibody or antigen-binding fragment thereof of claim 1, further comprising one or more of heavy chain framework region 1 (HFR1), HFR2, HFR3 and HFR4, and/or one or more of light chain framework region 1 (LFR1), LFR2, LFR3 and LFR4, wherein

(a) the HFR1 comprises an amino acid sequence of $X_6$VQLX7ESGGGLV KPGGSLRLSCAASG$X_8X_9$F$X_{10}$ (SEQ ID NO: 195), or a homologous sequence of at least 85% sequence identity thereof,

the HFR2 comprises an amino acid sequence of W$X_{11}$RQAPGKGLEW V$X_{12}$ (SEQ ID NO: 196), or a homologous sequence of at least 85% sequence identity thereof,

the HFR3 comprises an amino acid sequence of RFTISRD$X_{13}X_{14}$KS$X_{15}$ LYLQMNSL$X_{16}X_{17}$EDTAVYYCVR (SEQ ID NO: 197), or a homologous sequence of at least 85% sequence identity thereof,

the HFR4 comprises an amino acid sequence of SEQ ID NO: 157, or a homologous sequence of at least 85% sequence identity thereof,

the LFR1 comprises an amino acid sequence of $X_{20}$IVMTQSP$X_{21}X_{22}X_{23}$S$X_{24}$S$X_{25}$G$X_{26}$R$X_{27}$T$X_{28}X_{29}$C (SEQ ID NO: 198), or a homologous sequence of at least 85% sequence identity thereof,

the LFR2 comprises an amino acid sequence of WYQQKPG$X_{30}$AP$X_{31}$L FIY (SEQ ID NO: 199), or a homologous sequence of at least 85% sequence identity thereof,

the LFR3 comprises an amino acid sequence of GVP$X_{32}$RFSGSGSGT$X_{33}$FTLTISSLQ$X_{34}$EDFA$X_{35}$YYC (SEQ ID NO: 200), or a homologous sequence of at least 85% sequence identity thereof,, and

the LFR4 comprises an amino acid sequence of SEQ ID NO: 161, or a homologous sequence of at least 85% sequence identity thereof,

wherein, $X_6$ is Q or E; $X_7$ is Q or V; $X_8$ is F or Y; $X_9$ is A, D or N; $X_{10}$ is T or G; $X_{11}$ is I or V; $X_{12}$ is S or A; $X_{13}$ is N or D; $X_{14}$ is A or S; $X_{15}$ is S or T; $X_{16}$ is R or K; $X_{17}$ is A or T; $X_{20}$ is D or E; $X_{21}$ is S or A; $X_{22}$ is S or T; $X_{23}$ is L or V; $X_{24}$ is A or V; $X_{25}$ is V or P; $X_{26}$ is D or E; $X_{27}$ is V or A; $X_{28}$ is I or L; $X_{29}$ is T or S, $X_{30}$ is Q or K; $X_{31}$ is K or R; $X_{32}$ is S or A; $X_{33}$ is D or E; $X_{34}$ is S or P; $X_{35}$ is T or V.

7. The antibody or antigen-binding fragment thereof of any of the preceding claims, comprising a heavy chain variable region (VH) comprising an amino acid

sequence selected from the group consisting of SEQ Id NOs: 1, 17, 31, 46, 62, 77, 92, 107, 122, 137, 149, 162, 171, 176, 179, 182, 183, 185, 187, and 189, or a homologous sequence thereof having at least 80% sequence identity.

8. The antibody or antigen-binding fragment thereof of any of the preceding claims, comprising a light chain variable region (VL) comprising an amino acid sequence selected from the group consisting of SEQ Id NOs: 2, 18, 32, 47, 63, 78, 93, 108, 123, 138, 150, 163, 172, and 177, or a homologous sequence thereof having at least 80% sequence identity.

9. The antibody or antigen-binding fragment thereof of any of the preceding claims, comprising a heavy chain variable region (VH) comprising an amino acid sequence selected from the group consisting of SEQ Id NOs: 1, 149, 162, 171, 176, 179, 182, 183, 185, 187, and 189, or a homologous sequence thereof having at least 80% sequence identity.

10. The antibody or antigen-binding fragment thereof of any of the preceding claims, comprising a light chain variable region (VL) comprising an amino acid sequence selected from the group consisting of SEQ Id NOs: 2, 150, 163, 172, and 177, or a homologous sequence thereof.

11. The antibody or antigen-binding fragment thereof of any of the preceding claims, further comprising one or more amino acid residue substitutions or modifications yet retains binding specificity to human IL-36R.

12. The antibody or an antigen-binding fragment thereof of claim 11, wherein at least one of the substitutions or modifications is in one or more of the complementarity determining region (CDR) sequences of the heavy chain variable region or light chain variable region.

13. The antibody or an antigen-binding fragment thereof of claim 11, wherein at least one of the substitutions or modifications is in one or more of the non-CDR sequences of the heavy chain variable region or light chain variable region.

14. The antibody or an antigen-binding fragment thereof of any one of the preceding claims, further comprising an Fc region, optionally an Fc region of human immunoglobulin (Ig), or optionally an Fc region of human IgG.

15. The antibody or an antigen-binding fragment thereof of claim 14, wherein the Fc region is derived from human IgG4.

16. The antibody or an antigen-binding fragment thereof of claim 15, wherein the Fc region derived from human IgG4 comprises mutations of M252Y/S254T/T256 (YTE), or T307Q/N434A (QA).

17. The antibody or an antigen-binding fragment thereof of claim 15, comprising a heavy chain constant region comprising an amino acid sequence selected from the group consisting of SEQ Id NOs: 201, 203 and 204.

18. The antibody or an antigen-binding fragment thereof of claim 16, comprising a light chain constant region comprising an amino acid sequence of SEQ ID NO: 202.

19. The antibody or an antigen-binding fragment thereof of any one of the preceding claims, which is humanized.

20. The antibody or an antigen-binding fragment thereof of any one of the preceding claims, which is a monoclonal antibody, a bispecific antibody, a multi-specific antibody, a recombinant antibody, a chimeric antibody, a labeled antibody, a bivalent antibody, an anti-idiotypic antibody or a fusion protein.

21. The antibody or an antigen-binding fragment thereof of any one of the preceding claims, which is a diabody, a Fab, a Fab', a F(ab')2, a Fd, an Fv fragment, a disulfide stabilized Fv fragment (dsFv), a (dsFv)2, a bispecific dsFv (dsFv-dsFv'), a disulfide stabilized diabody (ds diabody), a single-chain antibody molecule (scFv), an scFv dimer (bivalent diabody), a multispecific antibody, a camelized single domain antibody, a nanobody, a domain antibody, or a bivalent domain antibody.

22. The antibody or an antigen-binding fragment thereof of any one of the preceding claims, which does not bind to cynomolgus IL-36R or mouse IL-36R.

23. The antibody or an antigen-binding fragment thereof of any one of the preceding claims, which does not bind to human IL-1R1.

24. The antibody or an antigen-binding fragment thereof of any one of the preceding claims, having one or more binding properties to human IL-36R selected from the group consisting of:

a) having a binding affinity to recombinant human IL-36R protein with a $K_d$ of no more than 2E-08 M (preferably no more than 1E-08 M, for example, no more than 9E-09M, 8E-09M, 7E-09M, 6E-09M, 5E-09M, 4E-09M, 3E-09M, 2E-09M, or 1E-10 M) as measured by Biolayer interferometry (BLI);

b) having a binding affinity to recombinant human IL-36R protein with a $K_d$ of no more than 1E-08 M (for example, no more than 9E-09M, 8E-09M, 7E-09M, 6E-09M, 5E-09M, 4E-09M, 3E-09M, 2E-09M, or 1E-10 M;) as measured by Surface Plasmon Resonance (SPR);

c) having a binding affinity to recombinant human IL-36R protein with an $EC_{50}$ of no more than 0.1 μg/mL (for example, 0.09 μg/mL, 0.08 μg/mL, 0.07 μg/mL, 0.06 μg/mL, 0.05 μg/mL, 0.04 μg/mL, 0.03 μg/mL, 0.02 μg/mL, 0.01 μg/mL, or 0.005 μg/mL) as measured by enzyme linked immunosorbent assay (ELISA); or

d) having a binding affinity to membrane human IL-36R with an $EC_{50}$ of no more than 0.5 μg/mL (for example, 0.4 μg/mL, 0.3 μg/mL, 0.2 μg/mL, 0.19 μg/mL,

0.18 μg/mL, 0.17 μg/mL, 0.16 μg/mL, 0.15 μg/mL, or 0.1 μg/mL) as measured by Fluorescence activated Cell Sorting (FACS).

25. The antibody or antigen-binding fragment thereof of any one of the preceding claims, capable of blocking IL-36R signaling induced by an IL-36R agonist (preferably IL-36α), as measured by IL-36R reporter assay.

26. The antibody or antigen-binding fragment thereof of any one of the preceding claims, capable of inhibiting IL-36R agonist-induced IL-8 release in a cell, wherein the IL-36R agonist includes IL-36α, IL-36β, and/or IL-36γ.

27. The antibody or antigen-binding fragment thereof of any one of the preceding claims, having the ability of inhibiting IL-36R agonist-induced IL-6 release in a cell, wherein the IL-36R agonist includes IL-36α, IL-36β, and/or IL-36γ.

28. The antibody or antigen-binding fragment thereof of any one of the preceding claims, having the ability of inhibiting IL-36R agonist-induced TNF-a release in a cell, wherein the IL-36R agonist includes IL-36α, IL-36β, and/or IL-36γ.

29. The antibody or an antigen-binding fragment thereof of any one of the preceding claims, which is linked to one or more conjugate moieties.

30. The antibody or an antigen-binding fragment thereof of claim 29, wherein the conjugate moiety comprises an agent for detection or isolation, such as clearance-modifying agent, a luminescent label, a fluorescent label, an enzyme-substrate label, or a purification moiety.

31. An isolated polynucleotide encoding the antibody or an antigen-binding fragment thereof of any one of claims 1-30.

32. A vector comprising the isolated polynucleotide of claim 31.

33. A host cell comprising the vector of claim 32.

34. A pharmaceutical composition, comprising:

(i) the antibody or an antigen-binding fragment thereof of any one of claims 1-30, or the polynucleotide encoding the antibody or antigen-binding fragment thereof of any one of claims1-30, or the recombinant immune cell of claim 35 or 36; and

(ii) one or more pharmaceutically acceptable carriers.

35. The pharmaceutical composition of claim 34, further comprising an additional therapeutic agent.

36. The pharmaceutical composition of claim 35, wherein the additional therapeutic agent is an agent for treating a disease or disorder that is responsive to IL-36R inhibition.

37. A method of expressing the antibody or an antigen-binding fragment thereof of any one of claims 1-30, comprising culturing the host cell of claim 33 under the condition at which the vector of claim 32 is expressed.

38. Use of a therapeutically effective amount of the antibody or an antigen-binding fragment thereof of any one of claims 1-30, or the polynucleotide encoding the antibody or antigen-binding fragment thereof of any one of claims1-30,and/or the pharmaceutical composition of any one of claim 34-36 in the manufacture of a medicament for treating, preventing or alleviating a disease or disorder that is responsive to IL-36R inhibition in a subject.

39. The use of claim 38, wherein the disease or disorder is associated with dysregulation of IL-36R mediated signaling.

40. The use of claim 39, wherein the dysregulation of IL-36R mediated signaling includes dysregulation of IL-36 (IL-36α, IL-36β, or IL-36γ), IL-36R antagonist and/or IL-38.

41. The use of claim 39 or 40, wherein the dysregulation of IL-36R mediated signaling includes over activation of IL-36 (IL-36α, IL-36β, or IL-36γ), or over suppression of IL-36R antagonist and IL-38, compared with control level.

42. The use of claim 41, wherein the control level is the level in a healthy subject.

43. The use of claim 38, wherein the disease or disorder is selected from the group consisting of: inflammatory disease, an autoimmune disease, a respiratory disease, a metabolic disorder, and cancer.

44. The use of claim 43, wherein the inflammatory disease is selected from the group consisting of: allergic inflammation of the skin, lungs, and gastrointestinal tract, atopic dermatitis (also known as atopic eczema), asthma (allergic and non-allergic), epithelial-mediated inflammation, fibrosis (e.g., idiopathic pulmonary fibrosis, scleroderma, kidney fibrosis, and scarring), allergic rhinitis, food allergies (e.g., allergies to peanuts, eggs, dairy, shellfish, tree nuts, etc.), seasonal allergies, and other allergies.

45. The use of claim 44, wherein the inflammatory disease is selected from the group consisting of: allergic inflammation of the skin, lungs, and gastrointestinal tract, atopic dermatitis (also known as atopic eczema), asthma (allergic and non-allergic), and epithelial-mediated inflammation.

46. The use of claim 43, wherein the autoimmune disease is selected from the group consisting of: multiple sclerosis, asthma, type 1 diabetes mellitus, rheumatoid arthritis, scleroderma, Crohn's disease, psoriasis vulgaris (commonly referred to as psoriasis), hidradenitis suppurativa, generalized pustular psoriasis (GPP), palmo-plantar pustulosis (PPP), inflammatory bowel disease, psoriatic arthritis, systemic lupus erythematosus (SLE), ulcerative colitis, ankylosing spondylitis, atopic dermatitis, acne vulgaris, and Behcet's disease.

47. The use of claim 46, wherein the autoimmune disease is selected from the group consisting of: psoriasis vulgaris (commonly referred to as psoriasis), hidradenitis suppurativa, generalized pustular psoriasis (GPP), palmo-plantar pustulosis (PPP), inflammatory bowel disease, atopic dermatitis, acne vulgaris, and Behcet's disease.

48. The use of claim 43, wherein the respiratory disease is selected from the group consisting of: asthma, cystic fibrosis, emphysema, chronic obstructive pulmonary disease (COPD), and acute respiratory distress syndrome.

49. The use of claim 43, wherein the metabolic disease is selected from the group consisting of: obesity, type 2 diabetes, atherosclerosis, and cardiovascular disease.

50. The use of claim 43, wherein the cancer can be any type of cancer known in the art, including but not limited to, melanoma, renal cell carcinoma, lung cancer, bladder cancer, breast cancer, cervical cancer, colon cancer, gall bladder cancer, laryngeal cancer, liver cancer, thyroid cancer, stomach cancer, salivary gland cancer, prostate cancer, pancreatic cancer, leukemia, lymphoma, and Merkel cell carcinoma.

51. The use of claim 38, wherein the disease or disorder is selected from the group consisting of: psoriasis, pustular psoriasis, hidradenitis suppurativa, ichthyosis,

inflammatory bowel disease (IBD), atopic dermatitis, acne vulgaris, and Behcet's disease.

52. The use of any one of claims 38-51, wherein the subject is human.

53. The use of any one of claims 38-52, wherein the administration is via oral, nasal, intravenous, subcutaneous, sublingual, or intramuscular administration.

54. A method of detecting the presence or amount of IL-36R in a sample, comprising contacting the sample with the antibody or an antigen-binding fragment thereof of any one of claims 1-30, and determining the presence or the amount of IL-36R in the sample.

55. The method of claim 54, further comprising a step of determining whether IL-36R is over-expressed in the cells in the sample.

56. A chimeric antigen receptor (CAR) comprising an antigen binding domain, a transmembrane domain, and a TCR signaling domain, wherein the antigen binding domain specifically binds to IL-36R and comprises an antigen binding fragment of any of claims 1-30.

57. The CAR of claim 56, wherein the CAR further comprises a costimulatory domain.

58. A nucleic acid sequence encoding the chimeric antigen receptor (CAR) of claim 56 or 57.

59. A cell comprising the nucleic acid sequence of claim 58.

60. The cell genetically modified to express the CAR of claims 56 or 57.

61. A vector comprising the nucleic acid sequence of claim 58.

62. A method for stimulating a T cell-mediated immune response to an IL-36R-expressing cell or tissue in a mammal, the method comprising administering to the mammal an effective amount of a cell genetically modified to express the CAR of claim 56 or 57.

63. Use of an effective amount of a cell of claim 61 in the manufacture of a medicament for the treatment of a mammal having an IL-36R related disease or condition.

64. The use of claim 63, wherein the cell is an autologous T cell.

65. The use of claim 63, wherein the mammal is a human subject.

66. The use of claim 63, wherein the mammal is identified as having an IL-36R positive cell, or a cell with IL-36R signaling up-regulated.