We claim:

1. Use of a therapeutically effective amount of an antibody that specifically binds IL-4~~/~~ receptor (IL-~~13 pathway inhibitor~~4R) and a therapeutically effective amount of ~~a~~an antibody that specifically binds programmed death 1 (PD-1)~~ inhibitor~~ in the manufacture of a medicament for treating or inhibiting the growth of a tumor in a subject in need thereof~~.~~,

wherein the anti PD-1 antibody comprises three heavy chain complementarity determining regions (CDRs) (HCDR1, HCDR2 and HCDR3) of a heavy chain variable region (HCVR) and three light chain CDRs (LCDR1, LCDR2 and LCDR3) of a light chain variable region (LCVR), wherein HCDR1 comprises an amino acid sequence of SEQ ID NO: 13, HCDR2 comprises an amino acid sequence of SEQ ID NO: 14, HCDR3 comprises an amino acid sequence of SEQ ID NO: 15, LCDR1 comprises an amino acid sequence of SEQ ID NO: 16, LCDR2 comprises an amino acid sequence of SEQ ID NO: 17, and LCDR3 comprises an amino acid sequence of SEQ ID NO: 18.

2. The use according to claim 1, wherein the tumor comprises colorectal cancer, ovarian cancer, prostate cancer, bladder cancer, breast cancer, brain cancer, cervical cancer, ~~bladder cancer,~~ anal cancer, uterine cancer, colon cancer, liver cancer, pancreatic cancer, lung cancer, endometrial cancer, bone cancer, testicular cancer, skin cancer, kidney cancer, stomach cancer, esophageal cancer, head and neck cancer, salivary gland cancer, myeloma, Hodgkin's lymphoma, non-Hodgkin's lymphoma, follicular lymphoma, small lymphocytic lymphoma, lymphoplasmacytoid lymphoma, marginal zone lymphoma, mantle cell lymphoma, diffuse large B-cell lymphoma, B-cell lymphomas, lymphomatoid granulomatosis, Burkitt's lymphoma, acute lymphoblastic leukemia, hairy cell leukemia, or B cell chronic lymphocytic leukemia.

3. The use according to claim 1 or 2, wherein the tumor comprises a Type 2 immunity-dependent cancer.

4. The use according to claim 3, wherein the Type 2 immunity-dependent cancer comprises pancreatic cancer, breast cancer, colorectal cancer, ovarian cancer, brain cancer, skin cancer, prostate cancer, kidney cancer, lung cancer, Hodgkin's lymphoma, or bladder cancer.

5. The use according to any one of claims 1-4, wherein the tumor comprises pancreatic cancer.

6. The use according to any one of claims 1-4, wherein the tumor comprises non-small cell lung cancer.

7. The use according to any one of claims 1-4, wherein the tumor comprises lung squamous cell carcinoma.

8. The use according to any one of claims 1-7, wherein the tumor is primary, metastatic, or recurrent.

9. The use according to any one of claims 1-8, wherein the subject has been treated with a prior anti-tumor therapeutic agent or therapy.

10. The use according to any one of claims 1-9, wherein the subject has been treated with a PD-1 inhibitor.

11. The use according to any one of claims 1-10, wherein the tumor is resistant or non-responsive to prior treatment with a therapeutic agent or therapy.

12. The use according to any one of claims 1-11, wherein the subject exhibits upregulation of at least one cytokine.

13. The use according to claim 12, wherein the at least one cytokine comprises at least one of IL-4 and IL-13.

14. The use according to any one of claims 1-13, wherein the subject exhibits increased production of at least one cytokine.

15. The use according to claim 14, wherein the at least one cytokine comprises IL-4.

16. The use according to any one of claims 1-15, wherein the subject exhibits increased hyaluronic acid (HA) content in the tumor.

17. The use according to any one of claims 1-16, wherein the ~~IL-4/IL-13 pathway inhibitor is selected from the group consisting of an anti-IL-4 antibody, an anti-IL-13 antibody, an anti-IL-4/IL-13 bispecific antibody, an IL-4 receptor (IL-4R) inhibitor, an IL-4 trap, an IL-13 trap, and an anti-IL-4R antibody.~~

~~18. The use according to any one of claims 1-17, wherein the IL-4/IL-13 pathway inhibitor is an anti-IL-4 antibody.~~

~~19. The use according to any one of claims 1-17, wherein the IL-4/IL-13 pathway inhibitor is an anti-IL-13 antibody.~~

~~20. The use according to any one of claims 1-17, wherein the IL-4/IL-13 pathway inhibitor is an anti-IL-4/IL-13 bispecific antibody.~~

~~21. The use according to any one of claims 1-17, wherein the IL-4/IL-13 pathway inhibitor is an IL-4R inhibitor.~~

~~22. The use according to any one of claims 1-17, wherein the IL-4/IL-13 pathway inhibitor is an anti-IL-4R antibody.~~

~~23. The use according to claim 17 or 22, wherein the~~ anti-IL-4R antibody comprises a heavy chain variable region (HCVR) comprising the amino acid sequence of SEQ ID NO: 1 and a light chain variable region (LCVR) comprising the amino acid sequence of SEQ ID NO: 2.

~~24~~18. The use according to ~~claim 17 or 22~~any one of claims 1-16, wherein the anti-IL-4R antibody comprises a HCVR comprising three heavy chain complementarity determining regions (CDRs) (HCDR1, HCDR2 and HCDR3) and a LCVR comprising three light chain CDRs (LCDR1, LCDR2 and LCDR3), wherein: HCDR1 has an amino acid sequence of SEQ ID NO: 3; HCDR2 has an amino acid sequence of SEQ ID NO: 4; HCDR3 has an amino acid sequence of SEQ ID NO: 5; LCDR1 has an amino acid sequence of SEQ ID NO: 6; LCDR2 has an amino acid sequence of SEQ ID NO: 7; and LCDR3 has an amino acid sequence of SEQ ID NO: 8.

~~25~~19. The use according to claim ~~24~~18, wherein the HCVR comprises the amino acid sequence of SEQ ID NO: 1 and the LCVR comprises the amino acid sequence of SEQ ID NO: 2.

~~26~~20. The use according to any one of claims 17~~ and 22-25~~-19, wherein the anti-IL-4R antibody comprises a heavy chain and a light chain, wherein the heavy chain has an amino acid sequence of SEQ ID NO: 9.

27.21. The use according to any one of claims 17 and 22-25-19, wherein the anti-IL-4R antibody comprises a heavy chain and a light chain, wherein the light chain has an amino acid sequence of SEQ ID NO: 10.

2822. The use according to any one of claims 17 and 22-25-19, wherein the anti-IL-4R antibody comprises a heavy chain and a light chain, wherein the heavy chain has an amino acid sequence of SEQ ID NO: 9 and the light chain has an amino acid sequence of SEQ ID NO: 10.

29.23. The use according to any one of claims 1-17 and 22-28, wherein the anti-IL-4/IL-13 pathway inhibitor4R antibody is dupilumab or a bioequivalent thereof.

3024. The use according to any one of claims 1-1723, wherein the IL-4/IL-13 pathway inhibitor is selected from the group consisting of dupilumab, pascolizumab, AMG317, MEDI2045, MEDI9314, tralokinumab, lebrikzimab, anrukinzumab, dectrekumab, GSK679586, MEDI7836, romilkimab, an IL-4 trap, an IL-13 trap, AER-003, and pitrakinra.

31. The use according to any one of claims 1-30, wherein the PD-1 inhibitor is selected from an anti-PD-1 antibody, an HCVR of the anti-PD-L11 antibody, and an anti-PD-L2 antibody.

32. The use according to any one of claims 1-31, wherein the PD-1 inhibitor is an anti-PD-1 antibody that comprises a HCVR comprising the amino acid sequence of SEQ ID NO: 11 and athe LCVR comprising of the anti-PD-1 antibody comprises the amino acid sequence of SEQ ID NO: 12.

33. The use according to claim 32, wherein the HCVR comprises three heavy chain CDRs (HCDR1, HCDR2 and HCDR3) and the LCVR comprises three light chain CDRs (LCDR1, LCDR2 and LCDR3), wherein: HCDR1 has an amino acid sequence of SEQ ID NO: 13; HCDR2 has an amino acid sequence of SEQ ID NO: 14; HCDR3 has an amino acid sequence of SEQ ID NO: 15; LCDR1 has an amino acid sequence of SEQ ID NO: 16; LCDR2 has an amino acid sequence of SEQ ID NO: 17; and LCDR3 has an amino acid sequence of SEQ ID NO: 18.

34. The use according to claim 32 or 33, wherein the anti-PD-1 antibody comprises a HCVR/LCVR sequence pair of SEQ ID NOs: 11/12.

3525. The use according to any one of claims 32-341-24, wherein the anti-PD-1 antibody comprises a heavy chain and a light chain, wherein the heavy chain has an amino acid sequence of SEQ ID NO: 19.

3626. The use according to any one of claims 32-341-24, wherein the anti-PD-1 antibody comprises a heavy chain and a light chain, wherein the light chain has an amino acid sequence of SEQ ID NO: 20.

3727. The use according to any one of claims 32-341-24, wherein the anti-PD-1 antibody comprises a heavy chain and a light chain, wherein the heavy chain has an amino acid sequence of SEQ ID NO: 19 and the light chain has an amino acid sequence of SEQ ID NO: 20.

3828. The use according to any one of claims 1-3727, wherein the anti-PD-1 inhibitorantibody is cemiplimab or a bioequivalent thereof.

3929. The use according to any one of claims 1-31, wherein the PD-1 inhibitor is an anti-PD-1 antibody selected from the group consisting of cemiplimab, nivolumab, pembrolizumab, pidilizumab, MEDI0608, BI 754091, PF-06801591, sintilimab, AGEN2034, spartalizumab, camrelizumab, JNJ-63723283, and MCLA-134.

40. The use according to any one of claims 1-31, wherein the PD-1 inhibitor is an anti-PD-L1 antibody selected from the group consisting of H1H8314N, avelumab, atezolizumab, durvalumab, MDX-1105, LY3300054, FAZ053, STI-1014, CX-072, KN035, and CK-301.

41. The use according to any one of claims 1-4028, wherein one or more doses of the anti-IL-4/IL-13 pathway inhibitor4R antibody is to be administered in combination with one or more doses of the anti-PD-1 antibody.

4230. The use according to claim 4129, wherein at least one dose of the IL-4/IL-13 pathway inhibitoranti-IL-4R antibody comprises about 0.1 to about 50 mg/kg of the subject's body weight.

4331. The use according to claim 4129, wherein at least one dose of the IL-4/IL-13 pathway inhibitoranti-IL-4R antibody comprises about 0.05 to about 1000 mg of the inhibitor.

4432. The use according to any one of claims 41-4329-31, wherein each dose of the IL-4/IL-13 pathway inhibitoranti-IL-4R antibody is to be administered 0.5 to 12 weeks after the immediately preceding dose.

4533. The use according to any one of claims 41-4429-32, wherein at least one dose of the anti-PD-1 inhibitorantibody comprises about 0.1 mg/kg to about 20 mg/kg of the subject's body weight.

4634. The use according to any one of claims 41-4429-32, wherein at least one dose of the anti-PD-1 inhibitorantibody comprises about 0.05 to about 500 mg of the inhibitor.

4735. The use according to claim 4533 or 4634, wherein each dose of the anti-PD-1 inhibitorantibody is to be administered 0.5 to 12 weeks after the immediately preceding dose.

48. 36. The use according to any one of claims 1-4735, wherein the anti-IL-4/IL-13 pathway inhibitor4R antibody is to be administered concurrently with the anti-PD-1 inhibitorantibody.

4937. The use according to any one of claims 1-4735, wherein the anti-IL-4/IL-13 pathway inhibitor4R antibody is to be administered prior to the anti-PD-1 inhibitorantibody.

5038. The use according to any one of claims 1-4735, wherein the anti-IL-4/IL-13 pathway inhibitor4R antibody is to be administered after the anti-PD-1 inhibitorantibody.

5139. The use according to any one of claims 1-5038, wherein administration of the medicament to be administered to the subject promotes tumor regression, delays tumor growth, reduces tumor cell load, reduces tumor burden, and/or prevents tumor recurrence in the subject.

5240. The use according to any one of claims 1-5139, wherein administration of the medicament to be administered to the subject promotes at least about 10% more tumor regression in the treated subject as compared to an untreated subject or a subject treated with either inhibitor as monotherapy.

5341. The use according to any one of claims 1-5139, wherein administration of the medicament to be administered to the subject leads to at least 30% or more decrease in tumor cells or tumor size as compared to an untreated subject or a subject treated with either inhibitor as monotherapy.

5442. The use according to any one of claims 1-5341, further comprising the administration of at least one additional therapeutic agent or therapy to be administered to the subject.

5543. The use according to claim 5442, wherein the additional therapeutic agent or therapy comprises chemotherapy, cyclophosphamide, surgery, radiation, a cancer vaccine, a LAG3

inhibitor, a CTLA-4 inhibitor, a GITR agonist, a TIM3 inhibitor, a BTLA inhibitor, a TIGIT inhibitor, a CD38 inhibitor, a CD47 inhibitor, an IDO inhibitor, a VEGF antagonist, an Ang2 inhibitor, a TGFβ inhibitor, an EGFR inhibitor, a VISTA inhibitor, a CD40 agonist, a CSF1R inhibitor, CCR2 inhibitor, CXCR4 inhibitor, CXCR2 inhibitor, CCR4 inhibitor, CXCL12 inhibitor, a CD28 activator, an agonist to a co-stimulatory receptor, an antibody to a tumor-specific antigen, an anti-CD3/anti-CD20 bispecific antibody, GM-CSF, a cytotoxin, a chemotherapeutic agent, an oncolytic virus, an IL-6R inhibitor, an IL-10 inhibitor, a cytokine, an ADC, chimeric antigen receptor T cells, an anti-inflammatory drug, a NSAID, and/or a dietary supplement.

~~56~~44. A pharmaceutical delivery system comprising: (a) a pharmaceutical composition comprising an antibody that specifically binds IL-4~~/~~ receptor (IL-~~13 pathway inhibitor~~4R) and a pharmaceutically acceptable carrier; and (b) a pharmaceutical composition comprising an antibody that specifically binds a programmed death 1 (PD-1) ~~inhibitor~~ and a pharmaceutically acceptable carrier, wherein the anti PD-1 antibody comprises three heavy chain complementarity determining regions (CDRs) (HCDR1, HCDR2 and HCDR3) of a heavy chain variable region (HCVR) and three light chain CDRs (LCDR1, LCDR2 and LCDR3) of a light chain variable region (LCVR), wherein HCDR1 comprises an amino acid sequence of SEQ ID NO: 13, HCDR2 comprises an amino acid sequence of SEQ ID NO: 14, HCDR3 comprises an amino acid sequence of SEQ ID NO: 15, LCDR1 comprises an amino acid sequence of SEQ ID NO: 16, LCDR2 comprises an amino acid sequence of SEQ ID NO: 17, and LCDR3 comprises an amino acid sequence of SEQ ID NO: 18.

~~57~~45. The pharmaceutical delivery system according to claim ~~56~~44, wherein the pharmaceutical compositions (a) and (b) are separate from each other.

~~58~~46. The pharmaceutical delivery system according to claim ~~56~~44 or ~~57~~45, wherein the pharmaceutical composition (a) comprises one or more doses of the ~~IL-4/IL-13 pathway inhibitor~~anti-IL-4R antibody .

~~59~~47. The pharmaceutical delivery system according to claim ~~58~~46, wherein at least one dose comprises ~~about~~ 5-1000 mg of the ~~IL-4/IL-13 pathway inhibitor~~anti-IL-4R antibody .

~~60~~48. The pharmaceutical delivery system according to any one of claims ~~56-59~~44-47, wherein the pharmaceutical composition (b) comprises one or more doses of the anti-PD-1 ~~inhibitor~~antibody.

6149. The pharmaceutical delivery system according to claim 6048, wherein at least one dose comprises about 5-500 mg of the anti-PD-1 inhibitorantibody.

6250. The pharmaceutical delivery system according to any one of claims 56-6144-49, wherein the anti-IL-4/IL-13 pathway inhibitor4R antibody is selected from the group consisting of an anti-IL-4 antibody, an anti-IL-13 antibody, an anti-IL-4/IL-13 bispecific antibody, an IL-4 receptor (IL-4R) inhibitor, an IL-4 trap, an IL-13 trap, and an anti-IL-4R antibody dupilumab.

63. The pharmaceutical delivery system according to claim 62, wherein the IL-4/IL-13 pathway inhibitor is selected from the group consisting of dupilumab, pascolizumab, AMG317, MEDI2045, MEDI9314, tralokinumab, lebrikzimab, anrukinzumab, dectrekumab, GSK679586, MEDI7836, romilkimab, an IL-4 trap, an IL-13 trap, AER-003, and pitrakinra.

6451. The pharmaceutical delivery system according to any one of claims 56-6344-50, wherein the PD-1 inhibitor is selected from the group consisting of an anti-PD-1 antibody, an anti-PD-L1 antibody, and an anti-PD-L2 antibody is cemiplimab.

6552. The pharmaceutical delivery system according to any one of claims 56-64, wherein the PD-1 inhibitor is an anti-PD-1 antibody selected from the group consisting of cemiplimab, nivolumab, pembrolizumab, pidilizumab, MEDI0608, BI 754091, PF-06801591, sintilimab, AGEN2034, spartalizumab, camrelizumab, JNJ-63723283, and MCLA-134.

66. The pharmaceutical delivery system according to any one of claims 56-64, wherein the PD-1 inhibitor is an anti-PD-L1 antibody selected from the group consisting of H1H8314N, avelumab, atezolizumab, durvalumab, MDX-1105, LY3300054, FAZ053, STI-1014, CX-072, KN035, and CK-301.

67. The pharmaceutical delivery system according to any one of claims 56-6644-51, further comprising at least one additional therapeutic agent selected from the group consisting of cyclophosphamide, a cancer vaccine, a LAG3 inhibitor, a CTLA-4 inhibitor, a GITR agonist, a TIM3 inhibitor, a BTLA inhibitor, a TIGIT inhibitor, a CD38 inhibitor, a CD47 inhibitor, an IDO inhibitor, a VEGF antagonist, an Ang2 inhibitor, a TGFβ inhibitor, an EGFR inhibitor, a VISTA inhibitor, a CD28 activator, a CD40 agonist, a CSF1R inhibitor, CCR2 inhibitor, CXCR4 inhibitor, CXCR2 inhibitor, CCR4 inhibitor, CXCL12 inhibitor, an agonist to a co-stimulatory receptor, an antibody to a tumor-specific antigen, an anti-CD3/anti-CD20 bispecific antibody, GM-CSF, a cytotoxin, a chemotherapeutic agent, an IL-6R inhibitor, an IL-10 inhibitor, an oncolytic virus, a

cytokine, an ADC, chimeric antigen receptor T cells, an anti-inflammatory drug, a NSAID, and a dietary supplement.

~~68~~53. The pharmaceutical delivery system according to any one of claims ~~56-67~~44-52 for use in treating or inhibiting the growth of a tumor.

~~69~~54. The pharmaceutical delivery system according to claim ~~68~~53, wherein the tumor comprises a Type 2 immunity-dependent cancer.

~~70~~55. A kit comprising the pharmaceutical delivery system according to any one of claims ~~56-69~~44-54 and written instructions for use of the ~~IL-4/IL-13 pathway inhibitor~~anti-IL-4R antibody in combination with the anti-PD-1 ~~inhibitor~~antibody for treating or inhibiting the growth of a tumor.

~~71~~56. Use of a therapeutically effective amount of an antibody that specifically binds IL-4 receptor (IL-~~4/IL-13 pathway inhibitor~~4R) in the manufacture of a medicament for treating or inhibiting the growth of a tumor in a subject in need thereof in combination with a therapeutically effective amount of ~~a~~an antibody that specifically binds programmed death 1 (PD-1~~) inhibitor~~), wherein the anti PD-1 antibody comprises three heavy chain complementarity determining regions (CDRs) (HCDR1, HCDR2 and HCDR3) of a heavy chain variable region (HCVR) and three light chain CDRs (LCDR1, LCDR2 and LCDR3) of a light chain variable region (LCVR), wherein HCDR1 comprises an amino acid sequence of SEQ ID NO: 13, HCDR2 comprises an amino acid sequence of SEQ ID NO: 14, HCDR3 comprises an amino acid sequence of SEQ ID NO: 15, LCDR1 comprises an amino acid sequence of SEQ ID NO: 16, LCDR2 comprises an amino acid sequence of SEQ ID NO: 17, and LCDR3 comprises an amino acid sequence of SEQ ID NO: 18.

~~72.~~ 57. Use of a therapeutically effective amount of an antibody that specifically binds a programmed death 1 (PD-1) ~~inhibitor~~ in the manufacture of a medicament for treating or inhibiting the growth of a tumor in a subject in need thereof in combination with a therapeutically effective amount of an ~~IL-4/IL-13 pathway inhibitor~~antibody that specifically binds IL-4 receptor (IL-4R), wherein the anti PD-1 antibody comprises three heavy chain complementarity determining regions (CDRs) (HCDR1, HCDR2 and HCDR3) of a heavy chain variable region (HCVR) and three light chain CDRs (LCDR1, LCDR2 and LCDR3) of a light chain variable region (LCVR), wherein HCDR1 comprises an amino acid sequence of SEQ ID NO: 13, HCDR2 comprises an amino acid sequence of SEQ ID NO: 14, HCDR3 comprises an amino acid sequence of SEQ ID NO: 15, LCDR1 comprises an amino acid sequence of SEQ ID NO: 16,

LCDR2 comprises an amino acid sequence of SEQ ID NO: 17, and LCDR3 comprises an amino acid sequence of SEQ ID NO: 18.