~~WHAT IS CLAIMED IS~~Claims:

1. An antibody comprising an antigen binding domain which specifically binds human PD-1, and comprises a heavy chain variable region (Vh) comprising CDR-H1 of SEQ ID NO: 31, CDR-H2 of SEQ ID NO: 32 and CDR-H3 of SEQ ID NO: 33 and/or a light chain variable region (Vk) comprising CDR-L1 of SEQ ID NO: 34, CDR-L2 of SEQ ID NO: 35 and CDR-L3 of SEQ ID NO: 36~~complementarity determining region (CDR) having a sequence selected from SEQ ID NOS 11-22, 31-42 and 59-63~~.

2. The ~~domain~~ antibody of claim 1, wherein the ~~comprising a~~ heavy chain variable region (Vh) comprises SEQ ID NO: 24 and/or ~~a~~ the light chain variable region (Vk) comprises SEQ ID NO: 26.~~comprising:~~

~~a) CDR-H1 (SEQ ID NO:11, 17, 31, or 37),~~ ~~b) CDR-H2 (SEQ ID NO:12, 18, 32, or 38),~~ ~~c) CDR-H3 (SEQ ID NO:13, 19, 33, or 39);~~	~~d) CDR-L1 (SEQ ID NO:14, 20, 34, or 40),~~ ~~e) CDR-L2 (SEQ ID NO:15, 21, 35, or 41), or~~ ~~f) CDR-L3 (SEQ ID NO:16, 22, 36, or 42).~~

~~3. The domain of claim 1 comprising a heavy chain variable region (Vh) or a light chain variable region (Vk) comprising:~~

~~a) mu317 CDR-H1, CDR-H2 and CDR-H3 (SEQ ID NOS:11-13); or~~
~~CDR-L1, CDR-L2 and CDR-L3 (SEQ ID NOS:14-16);~~
~~b) mu326 CDR-H1, CDR-H2 and CDR-H3 (SEQ ID NOS:17-19); or~~
~~CDR-L1, CDR-L2 and CDR-L3 (SEQ ID NOS:20-22);~~
~~c) 317-4B6 CDR-H1, CDR-H2 and CDR-H3 (SEQ ID NOS:31-33); or~~
~~CDR-L1, CDR-L2 and CDR-L3 (SEQ ID NOS:34-36);~~
~~d) 326-4A3 CDR-H1, CDR-H2 and CDR-H3 (SEQ ID NOS:37-39); or~~
~~CDR-L1, CDR-L2 and CDR-L3 (SEQ ID NOS:40-42);~~
~~e) 317-1H CDR-H1, CDR-H2 and CDR-H3 (SEQ ID NOS:11, 59, 13); or~~
~~CDR-L1, CDR-L2 and CDR-L3 (SEQ ID NOS:14-16);~~
~~f) 317-4B2 CDR-H1, CDR-H2 and CDR-H3 (SEQ ID NOS:11, 60, 13); or~~
~~CDR-L1, CDR-L2 and CDR-L3 (SEQ ID NOS:61, 15, 16);~~
~~g) 317-4B5 CDR-H1, CDR-H2 and CDR-H3 (SEQ ID NOS:11, 60, 13); or~~
~~CDR-L1, CDR-L2 and CDR-L3 (SEQ ID NOS:61, 15, 16);~~
~~h) 317-4B6 CDR-H1, CDR-H2 and CDR-H3 (SEQ ID NOS:11, 32, 13); or~~
~~CDR-L1, CDR-L2 and CDR-L3 (SEQ ID NOS:61, 15, 16);~~
~~i) 326-1 CDR-H1, CDR-H2 and CDR-H3 (SEQ ID NOS:17, 62, 19); or~~

~~CDR-L1, CDR-L2 and CDR-L3 (SEQ ID NOS:20-22);~~

~~j) 326-3B1 CDR-H1, CDR-H2 and CDR-H3 (SEQ ID NOS:17, 62, 19); or~~

~~CDR-L1, CDR-L2 and CDR-L3 (SEQ ID NOS:20-22);~~

~~k) 326-3G1 CDR-H1, CDR-H2 and CDR-H3 (SEQ ID NOS:17, 62, 19); or~~

~~CDR-L1, CDR-L2 and CDR-L3 (SEQ ID NOS:20-22).~~

~~4. The domain of claim 1 comprising a heavy chain variable region (Vh) and a light chain variable region (Vk) comprising:~~

~~a) mu317 CDR-H1, CDR-H2 and CDR-H3 (SEQ ID NOS:11-13); and~~

~~CDR-L1, CDR-L2 and CDR-L3 (SEQ ID NOS:14-16);~~

~~b) mu326 CDR-H1, CDR-H2 and CDR-H3 (SEQ ID NOS:17-19); and~~

~~CDR-L1, CDR-L2 and CDR-L3 (SEQ ID NOS:20-22);~~

~~c) 317-4B6 CDR-H1, CDR-H2 and CDR-H3 (SEQ ID NOS:31-33); and~~

~~CDR-L1, CDR-L2 and CDR-L3 (SEQ ID NOS:34-36);~~

~~d) 326-4A3 CDR-H1, CDR-H2 and CDR-H3 (SEQ ID NOS:37-39); and~~

~~CDR-L1, CDR-L2 and CDR-L3 (SEQ ID NOS:40-42);~~

~~e) 317-1H CDR-H1, CDR-H2 and CDR-H3 (SEQ ID NOS:11, 59, 13); and~~

~~CDR-L1, CDR-L2 and CDR-L3 (SEQ ID NOS:14-16);~~

~~f) 317-4B2 CDR-H1, CDR-H2 and CDR-H3 (SEQ ID NOS:11, 60, 13); and~~

~~CDR-L1, CDR-L2 and CDR-L3 (SEQ ID NOS:61, 15, 16);~~

~~g) 317-4B5 CDR-H1, CDR-H2 and CDR-H3 (SEQ ID NOS:11, 60, 13); and~~

~~CDR-L1, CDR-L2 and CDR-L3 (SEQ ID NOS:61, 15, 16);~~

~~h) 317-4B6 CDR-H1, CDR-H2 and CDR-H3 (SEQ ID NOS:11, 32, 13); and~~

~~CDR-L1, CDR-L2 and CDR-L3 (SEQ ID NOS:61, 15, 16);~~

~~i) 326-1 CDR-H1, CDR-H2 and CDR-H3 (SEQ ID NOS:17, 62, 19); and~~

~~CDR-L1, CDR-L2 and CDR-L3 (SEQ ID NOS:20-22);~~

~~j) 326-3B1 CDR-H1, CDR-H2 and CDR-H3 (SEQ ID NOS:17, 62, 19); and~~

~~CDR-L1, CDR-L2 and CDR-L3 (SEQ ID NOS:20-22);~~

~~k) 326-3G1 CDR-H1, CDR-H2 and CDR-H3 (SEQ ID NOS:17, 62, 19); or~~

~~CDR-L1, CDR-L2 and CDR-L3 (SEQ ID NOS:20-22).~~

~~5. The domain of claim 1 comprising a heavy chain variable region (Vh) and a light chain variable region (Vk) comprising:~~

(a) CDR-H1 (SEQ ID NO 31), CDR-H2 (SEQ ID NO 12, 32, 59 or 60) and CDR-H3 (SEQ ID NO 33),

CDR-L1 (SEQ ID NO 14, 34 or 61), CDR-L2 (SEQ ID NO 35) and CDR-L3 (SEQ ID NO 36); or

(b) CDR-H1 (SEQ ID NO 37), CDR-H2 (SEQ ID NO 18, 38 or 62) and CDR-H3 (SEQ ID NO 39),

CDR-L1 (SEQ ID NO 40), CDR-L2 (SEQ ID NO 41) and CDR-L3 (SEQ ID NO 42).

6. The domain of claim 1 comprising a heavy chain variable region (Vh) or a light chain variable region (Vk) comprising:

a) mu317 (SEQ ID NOS:4 or 6);	p) 317-3H1 (SEQ ID NOS:69);
b) mu326 (SEQ ID NOS:8 or 10);	q) 317-3I1 (SEQ ID NOS:70);
c) 317-4B6 (SEQ ID NOS:24 or 26);	
d) 326-4A3 (SEQ ID NOS:28 or 30);	r) 317-4B1 (SEQ ID NOS:71);
e) 317-4B2 (SEQ ID NOS:43 or 44);	s) 317-4B3 (SEQ ID NOS:72);
f) 317-4B5 (SEQ ID NOS:45 or 46);	t) 317-4B4 (SEQ ID NOS:73);
g) 317-1 (SEQ ID NOS:48 or 50);	u) 317-4A2 (SEQ ID NOS:74);
h) 326-3B1 (SEQ ID NOS:51 or 52);	v) 326-3A1 (SEQ ID NOS:75);
i) 326-3G1 (SEQ ID NOS:53 or 54);	w) 326-3C1 (SEQ ID NOS:76);
j) 326-1 (SEQ ID NOS:56 or 58);	x) 326-3D1 (SEQ ID NOS:77);
k) 317-3A1 (SEQ ID NOS:64);	y) 326-3E1 (SEQ ID NOS:78);
l) 317-3C1 (SEQ ID NOS:65);	z) 326-3F1 (SEQ ID NOS:79);
m) 317-3E1 (SEQ ID NOS:66);	aa) 326-3B N55D (SEQ ID NOS:80);
n) 317-3F1 (SEQ ID NOS:67);	ab) 326-4A1 (SEQ ID NOS: 81); or
o) 317-3G1 (SEQ ID NOS:68);	ac) 326-4A2 (SEQ ID NOS: 82).

7. The domain of claim 1 comprising a heavy chain variable region (Vh) and a light chain variable region (Vk) comprising:

a) mu317 (SEQ ID NOS:4 and 6);	p) 317-3H1 (SEQ ID NOS:69 and 26);
b) mu326 (SEQ ID NOS:8 and 10);	q) 317-3I1 (SEQ ID NOS:70 and 26);
c) 317-4B6 (SEQ ID NOS:24 and 26);	
d) 326-4A3 (SEQ ID NOS:28 and 30);	r) 317-4B1 (SEQ ID NOS:71 and 26);
e) 317-4B2 (SEQ ID NOS:43 and 44);	s) 317-4B3 (SEQ ID NOS:72 and 26);
f) 317-4B5 (SEQ ID NOS:45 and 46);	t) 317-4B4 (SEQ ID NOS:73 and 26);

~~g) 317-1 (SEQ ID NOS:48 and 50);~~	~~u) 317-4A2 (SEQ ID NOS:74 and 26);~~
~~h) 326-3B1 (SEQ ID NOS:51 and 52);~~	~~v) 326-3A1 (SEQ ID NOS:75 and 30);~~
~~i) 326-3G1 (SEQ ID NOS:53 and 54);~~	~~w) 326-3C1 (SEQ ID NOS:76 and 30);~~
~~j) 326-1 (SEQ ID NOS:56 and 58);~~	~~x) 326-3D1 (SEQ ID NOS:77 and 30);~~
~~k) 317-3A1 (SEQ ID NOS:64 and 26);~~	~~y) 326-3E1 (SEQ ID NOS:78 and 30);~~
~~l) 317-3C1 (SEQ ID NOS:65 and 26);~~	~~z) 326-3F1 (SEQ ID NOS:79 and 30);~~
~~m) 317-3E1 (SEQ ID NOS:66 and 26);~~	~~aa) 326-3B N55D (SEQ ID NOS:80 and 30);~~
~~n) 317-3F1 (SEQ ID NOS:67 and 26);~~	~~ab) 326-4A1 (SEQ ID NOS:28 and 81); or~~
~~o) 317-3G1 (SEQ ID NOS:68 and 26);~~	~~ac) 326-4A2 (SEQ ID NOS:28 and 82).~~

~~8. A domain of claim 1 which specifically binds PD1 residues:~~

~~(a) K45 and I93 (AA numbering based on 2008 PNAS, 105:10483; equivalent to K58 and I106 in SEQ ID NO 2); or~~

~~(b) I93, L95 and P97(AA numbering based on 2008 PNAS, 105:10483; equivalent to I106, L108 and P110 in SEQ ID NO 2).~~

~~9. The domain of claim 1 which induces IL-2 release in HuT78/PD-1 cells co-cultured with HEK293/OS8/PD-L1 cells or with EK293/OS8/PD-L2 cells, and/or inhibits of IL-2 secretion in HuT78/P3Z cells co-cultured with HEK293/PD-L1 cells or with HEK293/PD-L2 cells.~~

~~10. An antibody IgG4 heavy chain effector or constant domain comprising any of SEQ ID NO:83-88.~~

~~11~~3. ~~An~~ The antibody of claim 1, which is scFv, F(ab) or $F(ab)_2$ ~~comprising a domain of any of claims 1-8~~.

4. The antibody of claim 1, which is a full-length antibody.

5. The antibody of claim 4, which comprises an IgG4 Fc region.

6. The antibody of claim 5, wherein the IgG4 Fc region comprises an amino acid mutation at position 228 and at least one additional amino acid mutation at one or more positions selected from the group consisting of 233, 234, 235, 265, 309, and 409, according to EU numbering, wherein the at least one additional amino acid mutation causes the antibody to exhibit reduced

binding to at least one Fcγ receptor relative to Fc binding of a reference IgG4 antibody having the amino acid mutation at position 228 and no additional amino acid mutation.

7. The antibody of claim 6, wherein the amino acid mutation at position 228 is S228R and/or wherein the at least one additional amino acid mutation is selected from the group consisting of E233P, F234V, L235A, D265A/D265T, L309V, and R409K.

8. The antibody of claim 7, wherein the IgG4 Fc region comprises (i) S228P; (ii) S228P, E233P, F234V, L235A; (iii) S228P, E233P, F234V, L235A, D265A; (iv) S228P, E233P, F234V, L235A, D265T; (v) S228P, E233P, F234V, L235A, D265A, R409K; or (vi) S228P, E233P, F234V, L235A, D265A, L309V, R409K.

9. The antibody of claim 6, wherein the binding of the IgG4 Fc region of the antibody to one or more Fcγ receptors is reduced to null.

10. The antibody of claim 6, wherein the at least one Fcγ receptor is selected from FcγRI, FcγRIIA, FcγRIIB, and Fcγ RIIIA.

11. The antibody of claim 6, wherein the antibody exhibits reduced effector function relative to the reference IgG4 antibody.

12. The antibody of claim 11, wherein the reduced effector function is antibody-dependent cell-mediated cytotoxicity (ADCC).

13. The antibody of claim 5, wherein the IgG4 Fc region comprises any one of SEQ ID NOs: 83-88.

~~12~~14. ~~An~~ The antibody ~~comprising a domain~~ of claim ~~7~~ 13, wherein ~~and a~~the IgG4 Fc ~~heavy chain effector or constant domain~~region ~~comprising~~ comprises SEQ ID NO 87 or 88.

~~13~~15. A polynucleotide encoding ~~a domain~~the antibody of any one of claims 1-14.

~~14. A polynucleotide comprising a cDNA sequence encoding a domain of claim 1.~~

16. A vector comprising the polynucleotide of claim 15.

17. A cell comprising the polynucleotide of claim 15 or the vector of claim 16.

18. A composition comprising the antibody of any one of claims 1-14.

19. Use of the antibody of any one of claims 1-14 or the composition of claim 18 in the preparation of a medicament for treating a cancer in a subject.

20. Use of the antibody of any one of claims 1-14 or the composition of claim 18 in the preparation of a medicament for inhibiting tumor progression in a subject having a cancer.

21. Use of the antibody of any one of claims 1-14 or the composition of claim 18 in the preparation of a medicament for suppressing PD-1 mediated signal transduction in a subject having a cancer.

22. Use of the antibody of any one of claims 1-14 or the composition of claim 18 in the preparation of a medicament for activating immune cells in a subject having a cancer.

23. The use of any one of claims 19-22, wherein the cancer is selected from the group consisting of lung cancer, liver cancer, stomach cancer, breast cancer, ovarian cancer, pancreatic cancer, esophageal cancer, and melanoma.

~~15. A method of using a domain of claim 1 comprising the step of administering the domain to a person determined to have cancer or a viral infection or to otherwise be in need of PD-1 antagonism.~~

~~16. A fusion protein comprising:~~
~~(a) a single chain variable fragment (scFv) of an anti-human CD3 mAb OKT3 fused to the C-terminal domain (113-220) of mouse CD8α (SEQ ID NO:89); or~~
~~(b) the extracellular and transmembrane domains of human PD-1 fused to the cytoplasmic domain of human CD3ζ chain (SEQ ID NO: 90).~~

~~17. A method of using the fusion protein of claim 16, comprising assaying, screening or selecting anti-PD-1 antibodies with a cell line expressing the fusion protein.~~