

What is claimed:

1. An activatable anti-human CTLA-4 antibody comprising:
 - (i) a heavy chain comprising a heavy chain variable domain (VH) comprising CDRH1: SYTMH (SEQ ID NO: 557); CDRH2: FISYDGNNKYYADSVKG (SEQ ID NO: 558); and CDRH3: TGWLGPFDY (SEQ ID NO: 559); and
 - (ii) a light chain comprising:
 - (a) a light chain variable domain (VL) comprising CDRL1: RASQSVGSSYLA (SEQ ID NO: 560); CDRL2: GAFSRAT (SEQ ID NO: 561); and CDRL3: QQYGSSPWT (SEQ ID NO: 562);
 - (b) a cleavable moiety (CM); and
 - (c) a masking moiety (MM), wherein the MM is selected from the group consisting of YV01 (SEQ ID NO: 1), YV02 (SEQ ID NO: 2), YV03 (SEQ ID NO: 3), YV04 (SEQ ID NO: 4), YV09 (SEQ ID NO: 9), YV23 (SEQ ID NO: 23), YV24 (SEQ ID NO: 24), YV35 (SEQ ID NO: 35), YV39 (SEQ ID NO: 39), YV51 (SEQ ID NO: 51), YV61 (SEQ ID NO: 61), YV62 (SEQ ID NO: 62), YV63 (SEQ ID NO: 63), YV64 (SEQ ID NO: 64), YV65 (SEQ ID NO: 65), and YV66 (SEQ ID NO: 66),wherein the light chain has the structural arrangement from N-terminus to C-terminus as follows: MM-CM-VL.
2. The activatable anti-human CTLA-4 antibody of claim 1, wherein the CM is a substrate for a protease selected from the group consisting of MMP1, MMP2, MMP3, MMP8, MMP9, MMP11, MMP13, MMP14, MMP17, legumain, matriptase, and uPA.
3. The activatable anti-human CTLA-4 antibody of claim 2, wherein the CM is 2011 (SEQ ID NO: 304).
4. The activatable anti-human CTLA-4 antibody of claim 3, wherein the MM is YV04, YV23, YV24, YV39, YV61, YV62, YV63, or YV64.
5. The activatable anti-human CTLA-4 antibody of claim 1 comprising:

- (i) a heavy chain comprising the amino acid sequence of SEQ ID NO: 345; and
 - (ii) a light chain comprising an amino acid sequence selected from the group consisting of SEQ ID NOs: 563, 564, and 565.
- 6. The activatable anti-human CTLA-4 antibody of claim 5 comprising:
 - (i) a heavy chain comprising the amino acid sequence of SEQ ID NO: 345; and
 - (ii) a light chain comprising the amino acid sequence of SEQ ID NO: 564.
- 7. The activatable anti-human CTLA-4 antibody of claim 6, wherein:
 - (i) the heavy chain further comprises the human IgG1 constant domain sequence of SEQ ID NO: 350; and
 - (ii) the light chain further comprises the human light chain kappa constant domain sequence of SEQ ID NO: 346.
- 8. The activatable anti-human CTLA-4 antibody of claim 1, further comprising a first linker peptide (LP1) and a second linker peptide (LP2), wherein the activatable anti-human CTLA-4 antibody has the structural arrangement, from N-terminus to C-terminus, MM-LP1-CM-LP2-VL or MM-LP2-CM-LP1-VL.
- 9. The activatable anti-human CTLA-4 antibody of claim 8, wherein the LP1 and the LP2 are not identical to each other.
- 10. The activatable anti-human CTLA-4 antibody of claim 1 further comprising a spacer, and having the structural arrangement, from N-terminus to C-terminus, spacer-MM-CM-VL.
- 11. The activatable anti-human CTLA-4 antibody of claim 1 further comprising a toxic agent and/or a detectable moiety.
- 12. The activatable anti-human CTLA-4 antibody of claim 11, wherein the toxic agent and/or the detectable moiety is conjugated to the activatable antibody via a cleavable linker.

13. A pharmaceutical composition comprising the activatable anti-human CTLA-4 antibody of claim 1 and a carrier.
14. An isolated nucleic acid molecule encoding the heavy chain and/or the light chain of the activatable anti-human CTLA-4 antibody of claim 1.
15. A vector comprising the isolated nucleic acid molecule of claim 14.
16. A method of producing an activatable anti-human CTLA-4 antibody comprising:
 - (i) culturing a cell comprising the vector of claim 15 under conditions that lead to expression of the activatable antibody; and
 - (ii) recovering the activatable antibody.
17. The pharmaceutical composition of claim 13 for use in the reduction of CTLA-4 activity in a subject in need thereof, wherein an effective amount of the pharmaceutical composition is to be administered to the subject.
18. The pharmaceutical composition of claim 13 for use in the treatment, the alleviation a symptom of, or the delay progression of a cancer in a subject, wherein a therapeutically effective amount of the pharmaceutical composition is to be administered to the subject.
19. The pharmaceutical composition for use of claim 18, wherein the cancer is a bladder cancer, a bone cancer, a breast cancer, a carcinoid, a cervical cancer, a colon cancer, an endometrial cancer, a glioma, a head and neck cancer, a liver cancer, a lung cancer, a lymphoma, a melanoma, an ovarian cancer, a pancreatic cancer, a prostate cancer, a renal cancer, a sarcoma, a skin cancer, a stomach cancer, a testis cancer, a thyroid cancer, a urogenital cancer, or a urothelial cancer.
20. Use of the pharmaceutical composition of claim 13 in the manufacture of a medicament for the reduction of CTLA-4 activity in a subject in need thereof, wherein an effective amount of the medicament is to be administered to the subject.
21. Use of the pharmaceutical composition of claim 13 in the manufacture of a medicament for the treatment, the alleviation a symptom of, or the delay progression of a cancer in a

subject, wherein a therapeutically effective amount of the medicament is to be administered to the subject.

22. The use of claim 21, wherein the cancer is a bladder cancer, a bone cancer, a breast cancer, a carcinoid, a cervical cancer, a colon cancer, an endometrial cancer, a glioma, a head and neck cancer, a liver cancer, a lung cancer, a lymphoma, a melanoma, an ovarian cancer, a pancreatic cancer, a prostate cancer, a renal cancer, a sarcoma, a skin cancer, a stomach cancer, a testis cancer, a thyroid cancer, a urogenital cancer, or a urothelial cancer.
23. An activatable anti-human CTLA-4 antibody comprising a heavy chain and a light chain, wherein the heavy chain comprises the amino acid sequence of SEQ ID NO: 353, and the light chain comprises the amino acid sequence of SEQ ID NO: 448.