amino acid extension and not to any cysteine residues outside the C-terminal amino acid extension.

In certain aspects, the C-terminal amino acid extension includes two or more cysteine residues, and two or more agents are conjugated to the cysteine residues of the C-terminal amino acid extension. The methods of making such antibody conjugates may further include reducing the sulfhydryl groups of the cysteines in the C-terminal amino acid extension prior to conjugating the agents to the antibody. In certain aspects, the conjugating includes crosslinking the agents to the reduced sulfhydryl groups using maleimide reaction chemistry, haloacetyl reaction chemistry, vinyl sulfone reaction chemistry or pyridyl disulfide reaction chemistry. According to certain aspects, the agents that are conjugated to the cysteine residues of the C- terminal amino acid extensions are therapeutic agents and/or labeling agents. In one embodiment, the agents are conjugated to the cysteine residues of the C-terminal amino acid extension preferentially over cysteine residues outside the C-terminal amino acid extension. In one embodiment, the agents are conjugated to the cysteine residues of the C-terminal amino acid extension and not to any cysteine residues outside the C-terminal amino acid extension.

In one aspect, the present disclosure provides an antibody, or an antigen-binding fragment thereof, comprising a light chain polypeptide comprising a C-terminal amino acid extension comprising a cysteine residue, wherein the C-terminal amino acid extension does not specifically bind antigen.

In one aspect, the present disclosure provides a conjugate, comprising:

an antibody or an antigen-binding fragment thereof comprising a light chain polypeptide comprising a C-terminal amino acid extension comprising a cysteine residue; and

an agent conjugated to the antibody or antigen-binding fragment via the cysteine residue of the C-terminal amino acid extension.

In one aspect, the present disclosure provides a nucleic acid encoding a light chain polypeptide of an antibody, or an antigen-binding fragment thereof, that comprises a C-terminal amino acid extension comprising a cysteine residue.

In one aspect, the present disclosure provides a vector comprising the nucleic acid as disclosed herein.

In one aspect, the present disclosure provides a host cell comprising the nucleic acid as disclosed herein or the vector as disclosed herein.

In one aspect, the present disclosure provides a pharmaceutical composition comprising:

an antibody or an antigen-binding fragment as disclosed herein, or a conjugate as disclosed herein; and

a pharmaceutically acceptable excipient.

In one aspect, the present disclosure provides an antibody or an antigen-binding fragment as disclosed herein for use in therapy.

In one aspect, the present disclosure provides a conjugate as disclosed herein for use in therapy.

In one aspect, the present disclosure provides a method of making a light chain of an antibody or antigen-binding fragment, the method comprising:

expressing in a host cell the nucleic acid as disclosed herein.

In one aspect, the present disclosure provides a method of making a conjugate, the method comprising:

conjugating an agent to the antibody or antigen-binding fragment as disclosed herein, wherein the agent is conjugated to the cysteine residue of the C-terminal amino acid extension.

BRIEF DESCRIPTION OF THE FIGURES

FIG. 1 is a schematic illustration of an antibody that includes a C-terminal light chain extension according to one embodiment of the present disclosure.

FIG. 2 is a schematic illustration of a conjugate according to one embodiment of the present disclosure.

FIG. 3 provides cancer cell viability data for two example antibody conjugates according to embodiments of the present disclosure.

FIG. 4, Panels A and B show antibody binding data for unconjugated antibodies according to certain embodiments of the present disclosure.

FIG. 5, Panels A and B show antibody binding data for antibody-drug conjugates according to certain embodiments of the present disclosure.

FIG. 6 shows differential scanning calorimetry (DSC) data for an antibody having a C-terminal light chain extension according to one embodiment of the present disclosure. FIG. 7 is a gel image showing Alexa488 conjugation to an antibody according to an embodiment of the present disclosure.

C is a cysteine residue: and

a, b, c, d, e, f, g, h and i are integers independently selected from 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19 and 20, where the sum of b, e and h is at least 1, and the sum of c, f and i is at least 1. X, X', and X'' may be the same or different. Where c is greater than 1, then each X of $(X_aC_b)_c$ may be the same or different amino acid sequence within each repeat unit of $(X_aC_b)_c$. Where d or f is greater than 1, then each X' of $(X'_dC_e)_f$ may the same or different amino acid sequence within each repeat unit of $(X'_dC_e)_f$. Where g or i is greater than 1, then each X'' of $(X''_gC_h)_i$ may the same or different amino acid sequence within each repeat unit of $(X''_gC_h)_i$.

A C-terminal extension of the present disclosure may include (e.g., consist of) an amino acid sequence selected from: EPKSCDKTHTC (SEQ ID NO:92) (also referred to herein as extension 1); EPKSCDKTHTCPPC (SEQ ID NO:93) (also referred to herein as extension 2); EPKSC (SEQ ID NO:94) (also referred to herein as extension 3); ESKYGPPC (SEQ ID NO:95) (also referred to herein as extension 4); ERKCCVECPPC (SEQ ID NO:96) (also referred to herein as extension 5); ERKC (SEQ ID NO:97) (also referred to herein as extension 6); DVITMDPKDNC (SEQ ID NO:98) (also referred to herein as extension 7); DHVKPKETENTKQPSKSCHKPK (SEQ ID NO:99) (also referred to herein as extension 8); ESSC (SEQ ID NO:100) (also referred to herein as extension 9); ESSCDVKLV (SEQ ID NO:101) (also referred to herein as extension 10); DHVKPKETENTKQPSKSC (SEQ ID NO:102) (also referred to herein as extension 11); DVITMDPKDNCSKDAN (SEQ ID NO:103) (also referred to herein as extension 12); CAA, CCAA (SEQ ID NO: ~~128~~132), AACAA (SEQ ID NO:129), and GGGGSCAA (SEQ ID NO:130).

The present disclosure also provides nucleic acids encoding any of the C-terminal extensions described herein (e.g., C-terminal extension of Formula II, etc.), as well as nucleic acids encoding any of the light chain polypeptides described herein (e.g., light chain polypeptides comprising a C-terminal extension of Formula II, etc.).

The present disclosure provides antibodies having at least one light chain polypeptide having a C-terminal extension of the present disclosure. In some embodiments, the antibody has two light chain polypeptides having a C-terminal extension of the present disclosure. In some embodiments, such antibodies can be conjugated to an agent/payload (e.g., a drug) through covalent attachment to at least one cysteine in the C-terminal extension present in at least one of

Claims

What is claimed is:

1. An antibody comprising a light chain polypeptide comprising a C-terminal amino acid extension comprising a cysteine residue, wherein the C-terminal amino acid extension does not specifically bind antigen.

2. The antibody of Claim 1, wherein the C-terminal amino acid extension comprises an amino acid spacer that does not comprise a cysteine residue.

3. The antibody of Claim 1 or Claim 2, wherein the spacer comprises from 1 to 30 amino acids.

4. The antibody of Claim 1 or Claim 2, wherein the spacer comprises from 3 to 20 amino acids.

5. The antibody of Claim 1 or Claim 2, wherein the spacer comprises from 4 to 17 amino acids.

6. The antibody of any one of Claims 2 to 5, wherein the spacer comprises a glycine (G) residue and a serine (S) residue.

7. The antibody of any one of Claims 2 to 5, wherein the spacer consists of a) one or more glycine (G) residues, and b) one or more serine (S) residues.

8. The antibody of any one of Claims 2 to 5, wherein the spacer comprises the sequence GGGS.

9. The antibody of any one of Claims 2 to 8, wherein the C-terminal amino acid extension comprises from 2 to 10 spacers.

10. The antibody of Claim 9, wherein the spacers have the same amino acid sequence.

11. The antibody of Claim 9, wherein the amino acid sequence of at least two of the spacers is different.

12. The antibody of any one of Claims 9 to 11, wherein a cysteine is present between each of the spacers.

13. The antibody of any one of Claims 9 to 11, wherein at least two of the spacers are contiguous.

14. The antibody of any one of Claims 1 to 13, wherein the extension comprises a human amino acid sequence.

15. The antibody of Claim 14, wherein the human amino acid sequence comprises an amino acid sequence of a human antibody hinge region or T cell receptor hinge region.

16. The antibody of any one of Claims 1 to 15, wherein the cysteine comprises a reduced sulfhydryl group.

17. The antibody of any one of Claims 1 to 15, comprising an agent conjugated to the antibody via the cysteine residue of the C-terminal amino acid extension.

18. The antibody of Claim 17, wherein the agent is conjugated to the cysteine residue via a linker.

19. The antibody of Claim 17 or 18, wherein the agent is a therapeutic agent.

20. The antibody of Claim 19, wherein the therapeutic agent is a cytotoxic agent.

21. The antibody of Claim 17 or 18, wherein the agent is a labeling agent.

22. The antibody of Claim 21, wherein the labeling agent is an *in vivo* imaging agent.

23. The antibody of any one of Claims 17-22, wherein the antibody does not include an agent conjugated to a cysteine other than a cysteine residue of the C-terminal amino acid extension.

24. The antibody of any one of Claims 17 to 22, wherein the C-terminal amino acid extension comprises two or more cysteines, and wherein at least two of the two or more cysteines are conjugated to an agent independently selected from a therapeutic agent and a labeling agent.

25. The antibody of any one of Claims 1 to 24, wherein the antibody is an antibody or binding fragment thereof selected from the group consisting of: an IgG, Fab, F(ab')2, Fab', Fv, ScFv, and a bispecific antibody.

26. A conjugate, comprising:

an antibody comprising a light chain polypeptide comprising a C-terminal amino acid extension comprising a cysteine residue; and

an agent conjugated to the antibody via the cysteine residue of the C-terminal amino acid extension.

27. The conjugate of Claim 26, wherein the agent is conjugated to the cysteine residue via a linker.

28. The conjugate of Claim 26 or Claim 27, wherein the C-terminal amino acid extension comprises an amino acid spacer that does not comprise a cysteine residue.

29. The conjugate of Claim 28, wherein the spacer comprises from 1 to 30 amino acids.

30. The conjugate of Claim 28, wherein the spacer comprises from 3 to 20 amino acids.

31. The conjugate of Claim 28, wherein the spacer comprises from 4 to 17 amino acids.

32. The conjugate of any one of Claims 28 to 31, wherein the spacer comprises a glycine (G) residue and a serine (S) residue.

33. The conjugate of any one of Claims 28 to 31, wherein the spacer consists of one or more glycine (G) residues and one or more serine (S) residues.

34. The conjugate of any one of Claims 28 to 31, wherein the spacer has the sequence GGGS.

35. The conjugate of any one of Claims 28 to 34, wherein the C-terminal amino acid extension comprises from 2 to 10 spacers.

36. The conjugate of Claim 35, wherein the spacers have the same amino acid sequence.

37. The conjugate of Claim 35, wherein the amino acid sequence of at least two of the spacers is different.

38. The conjugate of any one of Claims 35 to 37, wherein a cysteine is present between each of the spacers.

39. The conjugate of any one of Claims 35 to 37, wherein at least two of the spacers are contiguous.

40. The conjugate of any one of Claims 26 to 39, wherein the extension comprises a human amino acid sequence.

41. The conjugate of Claim 40, wherein the human amino acid sequence comprises an amino acid sequence of a human antibody hinge region or T cell receptor hinge region.

42. The conjugate of any one of Claims 26 to 41, wherein the cysteine comprises a reduced sulfhydryl group.

43. The conjugate of any one of Claims 26 to 42, wherein the agent is a therapeutic agent.

44. The conjugate of Claim 43, wherein the therapeutic agent is a cytotoxic agent.

45. The conjugate of any one of Claims 26 to 42, wherein the agent is a labeling agent.

46. The conjugate of Claim 45, wherein the labeling agent is an *in vivo* imaging agent.

47. The conjugate of any one of Claims 26 to 46, wherein the antibody does not include an agent conjugated to a cysteine other than a cysteine residue of the C-terminal amino acid extension.

48. The conjugate of any one of Claims 26 to 47, wherein the C-terminal amino acid extension comprises two or more cysteines, and wherein at least two of the two or more cysteines are conjugated to an agent independently selected from a therapeutic agent and a labeling agent.

49. The conjugate of any one of Claims 26 to 48, wherein the antibody is an antibody or binding fragment thereof selected from the group consisting of: an IgG, Fab, F(ab')2, Fab', Fv, ScFv, and a bispecific antibody.

50. A nucleic acid encoding an antibody light chain polypeptide comprising a C-terminal amino acid extension comprising a cysteine residue.

51. The nucleic acid of Claim 50, wherein the C-terminal amino acid extension comprises an amino acid spacer that does not comprise a cysteine residue.

52. The nucleic acid of Claim 51, wherein the spacer comprises from 1 to 30 amino acids.

53. The nucleic acid of Claim 52, wherein the spacer comprises from 3 to 20 amino acids.

54. The nucleic acid of Claim 53, wherein the spacer comprises from 4 to 17 amino acids.

55. The nucleic acid of any one of Claims 51 to 54, wherein the spacer comprises a glycine (G) residue and a serine (S) residue.

56. The nucleic acid of any one of Claims 51 to 54, wherein the spacer consists of one or more glycine (G) residues and one or more serine (S) residues.

57. The nucleic acid of any one of Claims 51 to 54, wherein the spacer has the sequence GGGS.

58. The nucleic acid of any one of Claims 51 to 57, wherein the C-terminal amino acid extension comprises from 2 to 10 spacers.

59. The nucleic acid of Claim 58, wherein the spacers have the same amino acid sequence.

60. The nucleic acid of any one of Claims 50 to 59, wherein the extension comprises a human amino acid sequence.

61. The nucleic acid of Claim 60, wherein the human amino acid sequence comprises an amino acid sequence of a human antibody hinge region.

62. The nucleic acid of Claim 58, wherein the amino acid sequence of at least two of the spacers is different.

63. The nucleic acid of any one of Claims 58 to 62, wherein a cysteine is present between each of the spacers.

64. The nucleic acid of any one of Claims 58 to 62, wherein at least two of the spacers are contiguous.

65. The nucleic acid of any one of Claims 50 to 64, wherein the antibody is an antibody or binding fragment thereof selected from the group consisting of: an IgG, Fab, F(ab')2, Fab', ScFv, and a bispecific antibody.

66. A vector comprising the nucleic acid of any one of Claims 50 to 65.

67. A host cell comprising the nucleic acid of any one of Claims 50 to 65 or the vector of Claim 66.

68. The host cell of Claim 67, wherein the host cell is selected from a prokaryotic cell and a eukaryotic cell.

69. A pharmaceutical composition comprising:

an antibody of any one of Claims 1 to 25 or a conjugate of any one of Claims 26 to 49; and

a pharmaceutically acceptable excipient.

70. A method comprising administering to a patient in need thereof a therapeutically effective amount of an antibody of any one of Claims 1 to 25, a conjugate of any one of Claims 26 to 49, or the pharmaceutical composition of Claim 69.

71. A method of making a light chain of an antibody, comprising:

expressing in a host cell a nucleic acid encoding an antibody light chain polypeptide comprising a C-terminal amino acid extension comprising a cysteine residue.

72. The method of Claim 71, wherein the method further comprises reducing the sulfhydryl group of the cysteine in the C-terminal amino acid extension.

73. A method of making an antibody conjugate, comprising:

conjugating an agent to an antibody comprising a light chain polypeptide comprising a C-terminal amino acid extension comprising a cysteine residue, wherein the agent is conjugated to the cysteine residue of the C-terminal amino acid extension.

74. The method of Claim 73, wherein the method further comprises reducing the sulfhydryl group of the cysteine in the C-terminal amino acid extension prior to conjugating the agent to the antibody.

75. The method of Claim 74, wherein the reducing comprises preferentially reducing one or more cysteines in the C-terminal amino acid extension over a cysteine not in the C-terminal amino acid extension.

76. The method of Claim 74, wherein the reducing comprises reducing one or more cysteines in the C-terminal amino acid extension and not reducing any cysteines not in the C-terminal amino acid extension.

77. The method of Claim 74, wherein the conjugating comprises crosslinking the agent to the reduced sulfhydryl group using maleimide reaction chemistry, haloacetyl reaction chemistry, vinyl sulfone reaction chemistry, or pyridyl disulfide reaction chemistry.

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78. The method of any one of Claims 73 to 77, wherein the agent is a therapeutic agent or a labeling agent.

CLAIMS

1. An antibody, or an antigen-binding fragment thereof, comprising a light chain polypeptide comprising a C-terminal amino acid extension comprising a cysteine residue, wherein the C-terminal amino acid extension does not specifically bind antigen.

2. The antibody or antigen-binding fragment of Claim 1, wherein the C-terminal amino acid extension comprises an amino acid spacer that does not comprise a cysteine residue.

3. The antibody or antigen-binding fragment of Claim 2, wherein the spacer comprises from 1 to 30 amino acids.

4. The antibody or antigen-binding fragment of Claim 2, wherein the spacer comprises from 3 to 20 amino acids, or from 4 to 17 amino acids.

5. The antibody or antigen-binding fragment of any one of Claims 2 to 4, wherein the spacer comprises one or more glycine (G) residues, and one or more serine (S) residues.

6. The antibody or antigen-binding fragment of any one of Claims 2 to 5, wherein the spacer comprises the sequence GGGS (SEQ ID NO:1).

7. The antibody or antigen-binding fragment of any one of Claims 2 to 6, wherein the C-terminal amino acid extension comprises from 2 to 10 spacers, and wherein (a) the spacers have the same amino acid sequence, or (b) at least two of the spacers have different amino acid sequences.

8. The antibody or antigen-binding fragment of Claim 7, wherein a cysteine residue is present between each of the spacers.

9. The antibody or antigen-binding fragment of Claim 7, wherein at least two of the spacers are contiguous.

10. The antibody or antigen-binding fragment of any one of Claims 1 to 9, wherein the C-terminal amino acid extension comprises a human amino acid sequence.

11. The antibody or antigen-binding fragment of Claim 10, wherein the human amino acid sequence comprises an amino acid sequence of a human antibody hinge region, or a portion thereof, or a T cell receptor hinge region, or a portion thereof.

12. The antibody or antigen-binding fragment of Claim 10, wherein the C-terminal amino acid extension comprises a sequence as set forth in any one of SEQ ID NO: 32, 33, 34, 35, 36, 37, 38, 39 or 40, or a portion thereof.

13. The antibody or antigen-binding fragment of any one of Claims 1 to 12, wherein the cysteine residue comprises a reduced sulfhydryl group.

14. The antibody or antigen-binding fragment of Claim 1, wherein the C-terminal amino acid extension comprises a sequence as set forth in any one of SEQ ID NO: 60, 63, 64, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102 or 103.

15. The antibody or antigen-binding fragment of any one of Claims 1 to 14, comprising an agent conjugated to the antibody or antigen-binding fragment via the cysteine residue of the C-terminal amino acid extension, wherein the agent is a therapeutic agent or a labeling agent.

16. The antibody or antigen-binding fragment of Claim 15, wherein the agent is conjugated to the cysteine residue via a linker.

17. The antibody or antigen-binding fragment of Claim 15 or 16, wherein the C-terminal amino acid extension comprises two or more cysteine residues, and wherein at least two of the two or more cysteine residues are conjugated to an agent independently selected from a therapeutic agent and a labeling agent.

18. The antibody or antigen-binding fragment of any one of Claims 1 to 17, wherein the antibody or antigen-binding fragment is selected from the group consisting of: an IgG, Fab, F(ab')2, Fab', Fv, ScFv, and a bispecific antibody.

19. A conjugate, comprising:

an antibody or an antigen-binding fragment thereof comprising a light chain polypeptide comprising a C-terminal amino acid extension comprising a cysteine residue; and

an agent conjugated to the antibody or antigen-binding fragment via the cysteine residue of the C-terminal amino acid extension.

20. The conjugate of Claim 19, wherein the agent is conjugated to the cysteine residue via a linker.

21. The conjugate of Claim 19 or 20, wherein the C-terminal amino acid extension comprises an amino acid spacer that does not comprise a cysteine residue.

22. The conjugate of Claim 21, wherein the spacer comprises from 1 to 30 amino acids.

23. The conjugate of Claim 21, wherein the spacer comprises from 3 to 20 amino acids, or from 4 to 17 amino acids.

24. The conjugate of any one of Claims 21 to 23, wherein the spacer comprises one or more glycine (G) residues and one or more serine (S) residues.

25. The conjugate of any one of Claims 21 to 24, wherein the spacer comprises the sequence GGGS (SEQ ID NO:1).

26. The conjugate of any one of Claims 21 to 25, wherein the C-terminal amino acid extension comprises from 2 to 10 spacers, and wherein (a) the spacers have the same amino acid sequence, or (b) at least two of the spacers have different amino acid sequences.

27. The conjugate of Claim 26, wherein a cysteine residue is present between each of the spacers.

28. The conjugate of Claim 26, wherein at least two of the spacers are contiguous.

29. The conjugate of any one of Claims 19 to 28, wherein the C-terminal amino acid extension comprises a human amino acid sequence.

30. The conjugate of Claim 29, wherein the human amino acid sequence comprises an amino acid sequence of a human antibody hinge region, or a portion thereof, or a T cell receptor hinge region, or a portion thereof.

31. The conjugate of Claim 29, wherein the C-terminal amino acid extension comprises a sequence as set forth in any one of SEQ ID NO: 32, 33, 34, 35, 36, 37, 38, 39 or 40, or a portion thereof.

32. The conjugate of Claim 19, wherein the C-terminal amino acid extension comprises a sequence as set forth in any one of SEQ ID NO: 60, 63, 64, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102 or 103.

33. The conjugate of any one of Claims 19 to 32, wherein the agent is a therapeutic agent.

34. The conjugate of Claim 33, wherein the therapeutic agent is a cytotoxic agent.

35. The conjugate of Claim 34, wherein the cytotoxic agent is an auristatin or analog thereof, or a hemiasterlin or an analog thereof.

36. The conjugate of any one of Claims 19 to 32, wherein the agent is a labeling agent.

37. The conjugate of Claim 36, wherein the labeling agent is an *in vivo* imaging agent.

38. The conjugate of any one of Claims 19 to 37, wherein the antibody or antigen-binding fragment does not include an agent conjugated to a cysteine residue other than a cysteine residue of the C-terminal amino acid extension.

39. The conjugate of any one of Claims 19 to 38, wherein the C-terminal amino acid extension comprises two or more cysteine residues, and wherein at least two of the two or more cysteine residues are conjugated to an agent independently selected from a therapeutic agent and a labeling agent.

40. The conjugate of any one of Claims 19 to 39, wherein the antibody or antigen-binding fragment is selected from the group consisting of: an IgG, Fab, F(ab')2, Fab', Fv, ScFv, and a bispecific antibody.

41. A nucleic acid encoding a light chain polypeptide of an antibody, or an antigen-binding fragment thereof, that comprises a C-terminal amino acid extension comprising a cysteine residue.

42. The nucleic acid of Claim 40, wherein the C-terminal amino acid extension comprises an amino acid spacer that does not comprise a cysteine residue.

43. The nucleic acid of Claim 42, wherein the spacer comprises from 1 to 30 amino acids.

44. The nucleic acid of Claim 42, wherein the spacer comprises from 3 to 20 amino acids, or from 4 to 17 amino acids.

45. The nucleic acid of any one of Claims 42 to 44, wherein the spacer comprises one or more glycine (G) residues and one or more serine (S) residues.

46. The nucleic acid of any one of Claims 42 to 45, wherein the spacer comprises the sequence GGGS (SEQ ID NO:1).

47. The nucleic acid of any one of Claims 42 to 46, wherein the C-terminal amino acid extension comprises from 2 to 10 spacers, and wherein (a) the spacers have the same amino acid sequence, or (b) at least two of the spacers have different amino acid sequences.

48. The nucleic acid of any one of Claims 41 to 47, wherein the C-terminal amino acid extension comprises a human amino acid sequence.

49. The nucleic acid of Claim 48, wherein the human amino acid sequence comprises an amino acid sequence of a human antibody hinge region, or a portion thereof, or a T cell receptor hinge region, or a portion thereof.

50. The nucleic acid of Claim 48, wherein the C-terminal amino acid extension comprises a sequence as set forth in any one of SEQ ID NO: 32, 33, 34, 35, 36, 37, 38, 39 or 40, or a portion thereof.

51. The nucleic acid of any one of Claims 42 to 47, wherein a cysteine residue is present between each of the spacers.

52. The nucleic acid of any one of Claims 42 to 47, wherein at least two of the spacers are contiguous.

53. The nucleic acid of Claim 41, wherein the C-terminal amino acid extension comprises a sequence as set forth in any one of SEQ ID NO: 60, 63, 64, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102 or 103.

54. A vector comprising the nucleic acid of any one of Claims 41 to 53.

55. A host cell comprising the nucleic acid of any one of Claims 41 to 53, or the vector of Claim 54.

56. The host cell of Claim 55, wherein the host cell is a prokaryotic cell or a eukaryotic cell.

57. A pharmaceutical composition comprising:

an antibody or an antigen-binding fragment of any one of Claims 1 to 18, or a conjugate of any one of Claims 19 to 40; and

a pharmaceutically acceptable excipient.

58. An antibody or an antigen-binding fragment of any one of Claims 1 to 18 for use in therapy.

59. A conjugate of any one of Claims 19 to 40 for use in therapy.

60. A method of making a light chain of an antibody or antigen-binding fragment, the method comprising:

expressing in a host cell the nucleic acid of any one of Claims 41 to 53.

61. The method of Claim 60, wherein the method further comprises reducing the sulfhydryl group of the cysteine residue in the C-terminal amino acid extension.

62. A method of making a conjugate, the method comprising:

conjugating an agent to the antibody or antigen-binding fragment of any one of Claims 1 to 14, wherein the agent is conjugated to the cysteine residue of the C-terminal amino acid extension.

63. The method of Claim 62, wherein the method further comprises reducing the sulfhydryl group of the cysteine residue in the C-terminal amino acid extension prior to conjugating the agent to the antibody or antigen-binding fragment.

64. The method of Claim 63, wherein the reducing comprises preferentially reducing one or more cysteine residues in the C-terminal amino acid extension over a cysteine residue not in the C-terminal amino acid extension.

65. The method of Claim 63, wherein the reducing comprises reducing one or more cysteine residues in the C-terminal amino acid extension and not reducing any cysteine residues not in the C-terminal amino acid extension.

66. The method of any one of Claims 63 to 65, wherein the conjugating comprises crosslinking the agent to the reduced sulfhydryl group using maleimide reaction chemistry, haloacetyl reaction chemistry, vinyl sulfone reaction chemistry, or pyridyl disulfide reaction chemistry.

67. The method of any one of Claims 62 to 66, wherein the agent is a therapeutic agent or a labeling agent.