WHAT IS CLAIMED IS:

1. An antibody-drug conjugate (ADC) compound of Formula (I):

$$\mathbf{Ab}\text{–}\{(\mathbf{S^*}\text{-}\mathbf{L^1})\text{–}[(\mathbf{M})_x\text{-}(\mathbf{L^2}\text{-}\mathbf{D})_y]\}_p \qquad (I)$$

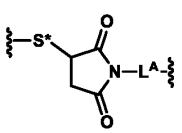
wherein:

Ab is an antibody;

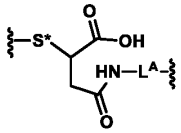
each S* is a sulfur atom from a cysteine residue of the antibody, an ϵ-nitrogen atom from a lysine residue of the antibody, or a triazole moiety, and

each L^1 is a first linker optionally substituted with a PEG Unit ranging from PEG2 to PEG72;

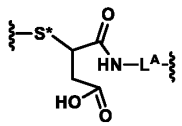
wherein S*-L^1 is selected from the group consisting of formulae A-K:



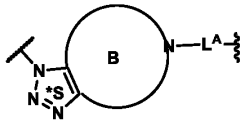
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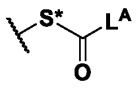
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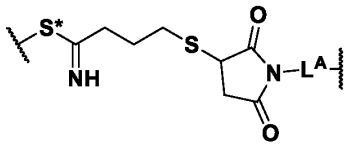
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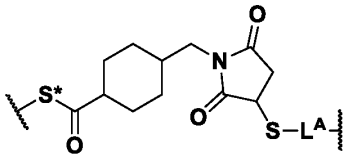
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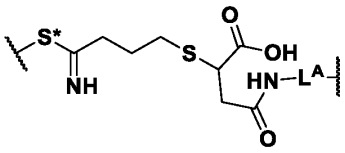
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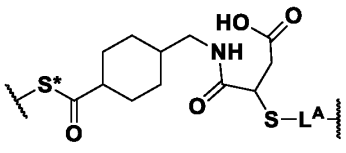
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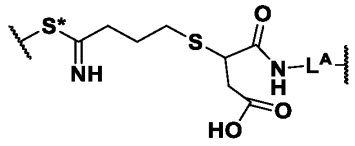
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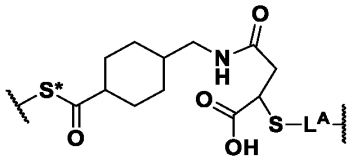
H



I



J



K

wherein:

each L^A is a C_{1-10} alkylene optionally substituted with 1-3 independently selected R^a, or a 2-24 membered heteroalkylene optionally substituted with 1-3 independently selected R^b;

each Ring B is an 8-12 membered heterocyclyl optionally substituted with 1-3 independently selected R^c, and further optionally fused to 1-2 rings each independently selected from the group consisting of C_{6-10} aryl and 5-6 membered heteroaryl;

each R^a, R^b, and R^c is independently selected from the group consisting of: C_{1-6} alkyl, C_{1-6} haloalkyl, C_{1-6} alkoxy, C_{1-6} haloalkoxy, halogen, -OH, =O, $-NR^dR^e$, $-C(O)NR^dR^e$, $-C(O)(C_{1-6}$ alkyl), $-(C_{1-6}$ alkylene)$-NR^dR^e$, and $-C(O)O(C_{1-6}$ alkyl);

each R^d and R^e are independently hydrogen or C_{1-3} alkyl; or R^d and R^e together with the nitrogen atom to which both are attached form a 5-6 membered heterocyclyl;

L^2 is an optional second linker optionally substituted with a PEG Unit selected from PEG2 to PEG20;

each M is a multiplexer;

subscript x is 0, 1, 2, 3, or 4;

subscript y is 2^x;

each D is a Drug Unit;

wherein L^1 and each $(M)_x$-$(D)_y$ when L^2 is absent, or each $(M)_x$-$(L^2$-$D)_y$ when L^2 is present, have a net zero charge at physiological pH;

subscript p is an integer ranging from 2 to 10; and

the ratio of D to Ab is 8:1 to 64:1.

2. The ADC compound of claim 1, wherein each S* is a sulfur atom from a cysteine residue of the antibody.

3. The ADC compound of claim 1 or 2, wherein the cysteine residues are native cysteine residues.

4. The ADC compound of claim 1 or 2, wherein the cysteine residues are from reduced interchain disulfide bonds, or are from engineered cysteine residues, or a combination thereof.

5. The ADC compound of claim 1 or 2, wherein the cysteine residues are engineered cysteine residues.

6. The ADC compound of claim 1 or 2, wherein one or more S* is a sulfur atom from an engineered cysteine residue(s); and each remaining S* is a sulfur atom from a native cysteine residue.

7. The ADC compound of claim 1, wherein each S* is an ϵ-nitrogen atom from a lysine residue of the antibody.

8. The ADC compound of claim 1 or 7, wherein the lysine residues are native lysine residues.

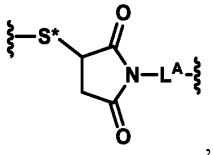
9. The ADC compound of claim 1 or 7, wherein the lysine residues are engineered lysine residues.

10. The ADC compound of claim 1 or 7, wherein one or more S* is an ϵ-nitrogen atom from an engineered lysine residue(s) of the antibody; and each remaining S* is an ϵ-nitrogen atom from a native lysine residue of the antibody.

11. The ADC compound of claim 1, wherein each S* of formula D is a triazole moiety.

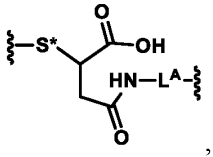
12. The ADC compound of any one of claims 1-11, wherein L^A is substituted with a PEG Unit ranging from PEG2 to PEG36.

13. The ADC compound of any one of claims 1-6, wherein S*-L^1 is:



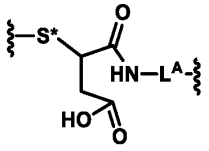
, wherein L^A is a C_{1-10} alkylene or a 2-10-membered heteroalkylene optionally substituted with 1 R^a or 1 R^b, respectively, and optionally substituted with a PEG Unit ranging from PEG8 to PEG24 or PEG12 to PEG32.

14. The ADC compound of any one of clams 1-6, wherein S*-L^1 is:



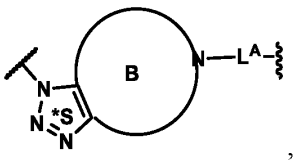
, wherein L^A is a C_{2-10} alkylene or 2-10-membered heteroalkylene either of which is unsubstituted or substituted with 1 R^a, wherein R^a is $-NR^dR^e$.

15. The ADC compound of any one of claims 1-6, wherein S*-L^1 is:



wherein L^A is a C_{2-10} alkylene or 2-10-membered heteroalkylene; each optionally substituted with 1 R^a or 1 R^b, respectively.

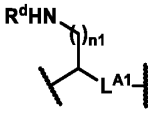
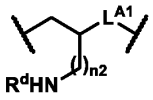
16. The ADC compound of claim 1 or 11, wherein S*-L^1 is:



, wherein L_A is C_{1-10} alkylene or a 2-10 membered heteroalkylene; each optionally substituted with 1-2 R^a or 1-2 R^b, respectively, provided

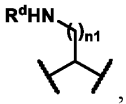
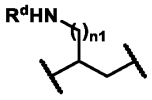
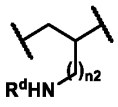
that one R^b is =O and the carbon atom of the 2-10 membered heteroalkylene so substituted is covalently attached to the nitrogen atom of Ring B;

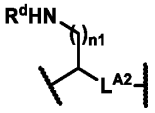
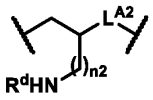
wherein Ring B is unsubstituted or substituted with 1-2 R^c, and is optionally fused to 1-2 rings each independently selected from the group consisting of C_{6-10} aryl and 5-6 membered heteroaryl.

17. The ADC compound of any one of claims 1-16, wherein L^A is  or  ; wherein L^{A1} is a bond or a C_{1-4} alkylene optionally substituted with 1 R^a; subscript n1 is 1-4; and subscript n2 is 0-4.

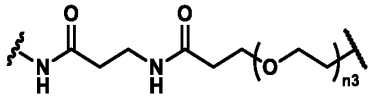
18. The ADC compound of any one of claims 1-17, wherein R^a and R^b are -(C_{1-6} alkylene)-NR^dR^e.

19. The ADC compound of any one of claims 1-18, wherein R^d and R^e are each hydrogen or are each methyl.

20. The ADC compound of claim 19, wherein L^A is , , or  ; wherein subscript n1 is 1 or 2; and subscript n2 is 0, 1, or 2.

21. The ADC compound of any one of claims 1-20, wherein L^A is  or  ; wherein L^{A2} is a C_{2-10} alkylene; subscript n1 is 1 or 2; subscript n2 is 0 or 1; and L^{A2} is further optionally substituted with a PEG Unit ranging from PEG12 to PEG32.

22. The ADC compound of any one of claims 1-21, wherein L^A is further optionally substituted with a PEG Unit ranging from PEG8 to PEG32.

23. The ADC compound of any one of claims 1-16 and 22, wherein L^A is  , wherein subscript n3 is 1-5.

24. The ADC compound of any one of claims 1, 7, and 16-23, wherein Ring B is an unsubstituted, unfused 8-12 membered heterocyclyl ring.

25. The ADC compound of any one of claims 1, 7, and 16-23, wherein Ring B is an unsubstituted 8-12 membered heterocyclyl fused to a C_{6-10} aryl or 5-6 membered heteroaryl ring.

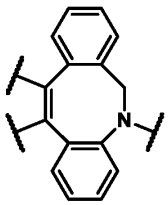
26. The ADC compound of any one of claims 1, 7, and 16-23, wherein Ring B is an unsubstituted 8-12 membered heterocyclyl fused to two C_{6-10} aryl rings or two 5-6 membered heteroaryl ring rings.

27. The ADC compound of any one of claims 1, 7, and 16-23, wherein Ring B is an unfused 8-12 membered heterocyclyl substituted with 1 R^c.

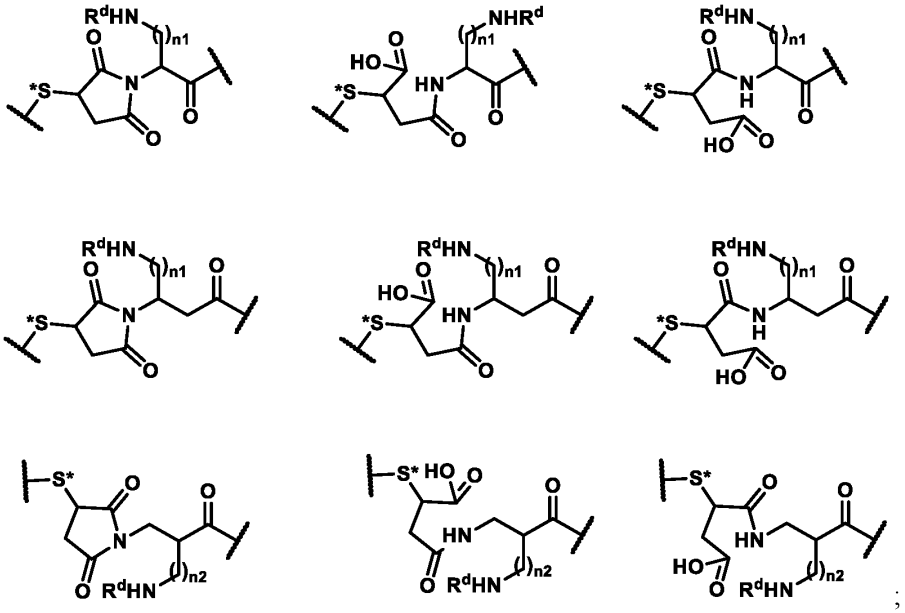
28. The ADC compound of any one of claims 1, 7, and 16-23, wherein Ring B is an 8-12 membered heterocyclyl substituted with 1 R^c, and fused to a C_{6-10} aryl or 5-6 membered heteroaryl ring.

29. The ADC compound of any one of claims 1, 7, and 16-23, wherein Ring B is an unsubstituted 8-12 membered heterocyclyl and fused to two C_{6-10} aryl rings or two 5-6 membered heteroaryl ring rings.

30. The ADC compound of any one of claims 1, 7, and 16-23, wherein Ring B is:



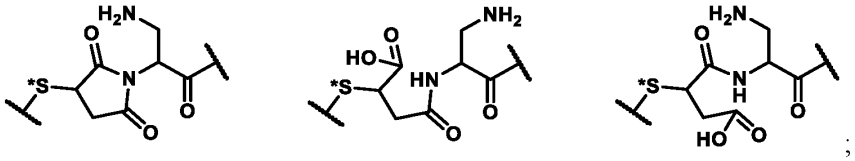
31. The ADC compound of any one of claim 1-6, wherein S*-L^1 is selected from the group consisting of:



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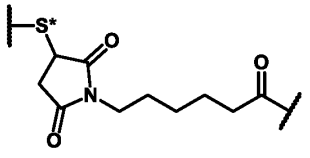
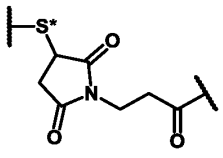
wherein subscript n1 is 1 or 2; and subscript n2 is 0, 1, or 2; and S* is a sulfur atom from a cysteine residue of the antibody.

32. The ADC compound of claim 31, wherein *S-L is selected from the group consisting of:

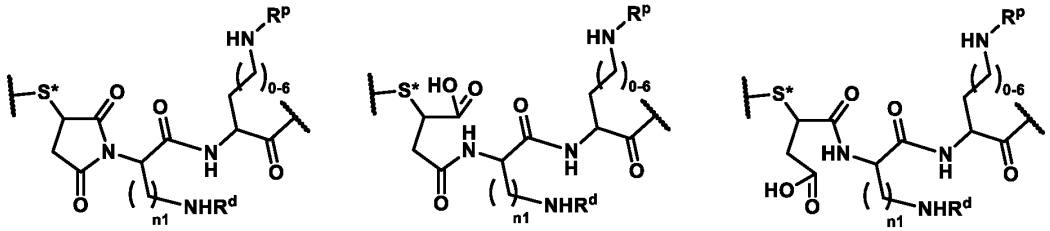

;

wherein S* is a sulfur atom from a cysteine residue of the antibody.

33. The ADC compound of any one of claims 1-6, wherein S*-L:

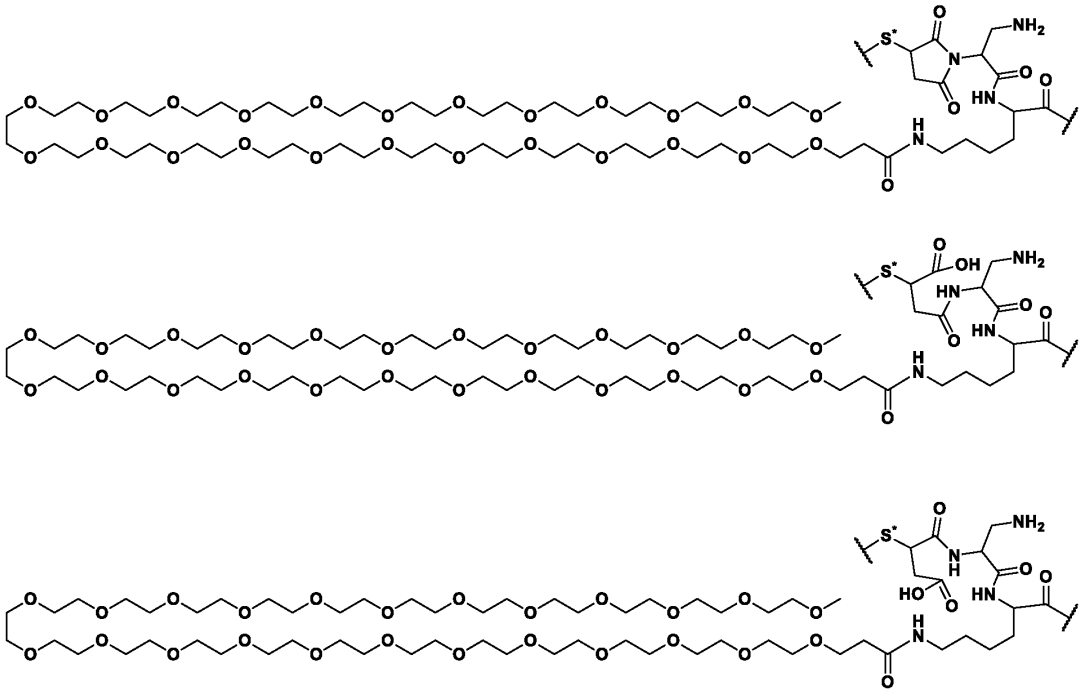

or

; wherein S* is a sulfur atom from a cysteine residue of the antibody.

34. The ADC compound of any one of claims 1-6, wherein *S-L^1 is selected from the group consisting of:

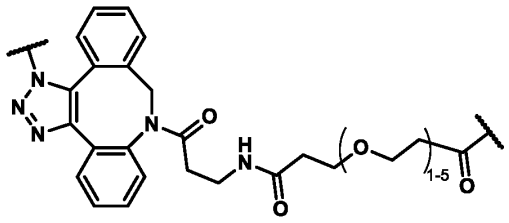


wherein R^p is a PEG Unit ranging from PEG8-PEG24, wherein the PEG Unit comprises a -(C_{1-3} alkylene)C(=O)- group, the carbonyl carbon atom of which provides covalent attachment of R^P to the nitrogen atom; and S* is a sulfur atom from a cysteine residue of the antibody.

35. The ADC compound of claim 34, wherein *S-L^1 is selected from the group consisting of:

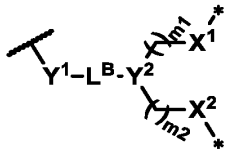


36. The ADC compound of claim 1 or 7, wherein *S-L^1 is:



37. The ADC compound of any one of claims 1-36, wherein subscript x is 1.

38. The ADC compound of claim 1 or 37, wherein M is:



wherein the wavy line represents the covalent attachment of M to L^1;

each * represents the covalent attachment of M to $–L^2$-D;

Y^1 is selected from the group consisting of: a bond, -S-, -O-, and –NH-;

Y^2 is selected from the group consisting of: CH and N;

L^B is absent or a C_{1-6} alkylene that is optionally interrupted with a group selected from the group consisting of: -O-, -NH-, -N(C_{1-3} alkyl)-, -C(=O)NH-, -NHC(=O)-, -C(=O)O-, and -O(C=O)-;

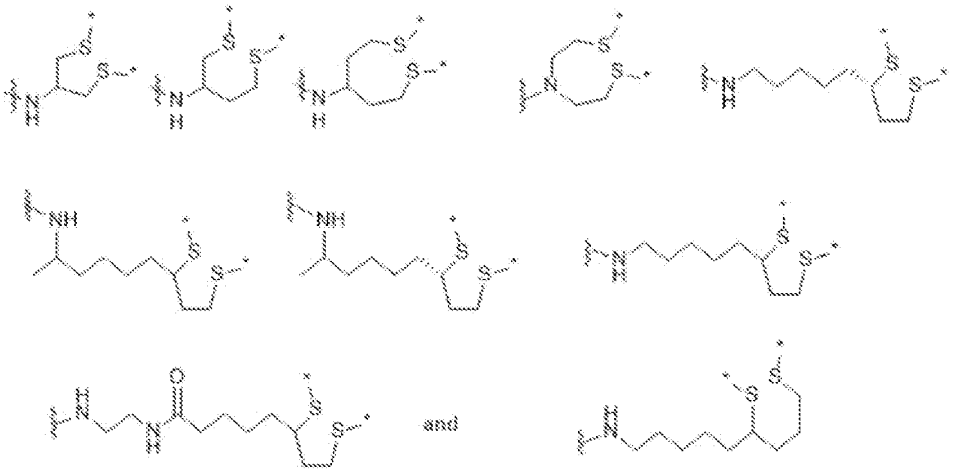
X^1 and X^2 are each independently –S-, -O-, or –NH-; and

subscripts m1 and m2 are each independently 1-4.

39. The ADC compound of any one of claims 1 or 37-38, wherein Y^1 is –NH-; L^B is present; Y^2 is CH; and X^1 and X^2 are each –S-.

40. The ADC compound of any one of claims 1 or 37-38, wherein Y^1 is a bond; L^B is absent; Y^2 is N; and X^1 and X^2 are each –S-.

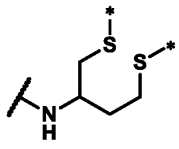
41. The ADC compound of any one of claims 1 or 37-38, wherein M is selected from the group consisting of:



;

wherein the wavy line represents the covalent attachment of M to L^1; and

wherein each * represents the covalent attachment of M to -(L^2-D).

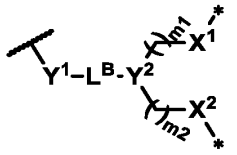
42. The ADC compound of any one of claims 1-36, wherein M is  .

43. The ADC compound of any one of claims 1-36, wherein subscript x is 2-4; and $(M)_x$ is $–M^1-(M^2)_{x-1}$, wherein M^1 and each M^2 are independently selected multiplexers.

44. The ADC compound of claim 43, wherein subscript x is 2; and $(M)_x$ is $–M^1-M^2$.

45. The ADC compound of claim 43, wherein subscript x is 3; and $(M)_x$ is $–M^1-(M^2)_2$.

46. The ADC compound of any one of claims 3-45, wherein M^1 is:



wherein the wavy line represents the covalent attachment of M to L^1;

each * represents the covalent attachment of M^1 to M^2;

Y^1 is selected from the group consisting of: a bond, -S-, -O-, and –NH-;

Y^2 is selected from the group consisting of: CH and N;

L^B is absent or a C_{1-6} alkylene that is optionally interrupted with a group selected from the group consisting of: -O-, -NH-, -N(C_{1-3} alkyl)-, -C(=O)NH-, -NHC(=O)-, -C(=O)O-, and -O(C=O)-;

X^1 and X^2 are each independently –S-, -O-, or –NH-; and

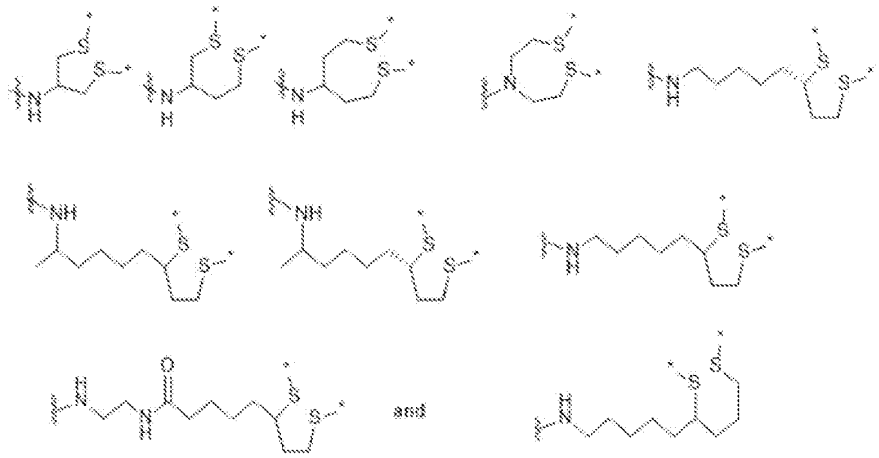
subscripts m1 and m2 are each independently 1-4.

47. The ADC compound of claim 46, wherein Y^1 is –NH-; L^B is present; Y^2 is CH; and X^1 and X^2 are each –S-.

48. The ADC compound of claim 46, wherein Y^1 is a bond; L^B is absent; Y^2 is N; and X^1 and X^2 are each –S-.

49. The ADC compound of claim 46, wherein Y^1 is a bond; L^B is absent; Y^2 is N; and X^1 and X^2 are each –NH.

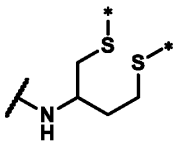
50. The ADC compound of claim 46, wherein M^1 is selected from the group consisting of:

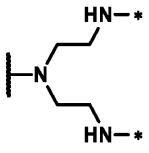


;

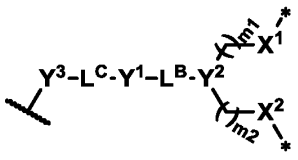
wherein the wavy line represents the covalent attachment of M to L^1; and

wherein each * represents the covalent attachment of M to -(L^2-D).

51. The ADC compound of claim 46, wherein M^1 is  .

52. The ADC compound claim 46, wherein M^1 is  .

53. The ADC compound of any one of claims 43-52, wherein each M^2 is independently:



wherein the wavy line represents the covalent attachment of M^2 to M^1 or to another M^2;

each * represents the covalent attachment of M^2 to L^2-D or another M^2;

Y^1 is a bond, -S-, -O-, or –NH-;

Y^2 is CH or N;

Y^3 is an optional group that provides covalent attachment of M^1 to the L^C (when present) or to Y^1 (when L^C is absent) of M^2;

L^B is absent or a C_{1-6} alkylene that is optionally interrupted with a group selected from the group consisting of: -O-, -NH-, -N(C_{1-3} alkyl)-, -C(=O)NH-, -NHC(=O)-, -C(=O)O-, and -O(C=O)-;

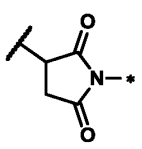
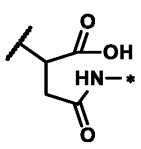
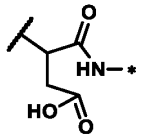
X^1 and X^2 are each independently –S-, -O-, or –NH-;

L^C is a C_{1-10} alkylene optionally substituted with 1-3 substituents each independently selected from -(C_{1-6} alkylene)-NR^dR^e, NRdRe, and oxo; and

subscripts m1 and m2 are each independently 1-4.

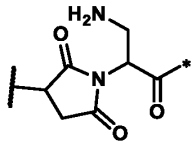
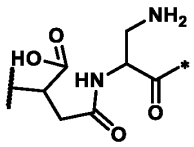
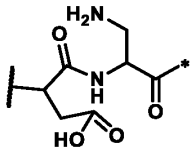
54. The ADC compound of claim 53, wherein Y^3 is -C(=O)-.

55. The ADC compound of claim 53, wherein Y^3 is selected from the group consisting of:




;

wherein * represents the covalent attachment to L^C; and the wavy line represents the covalent attachment to M^1 or another M^2.

56. The ADC compound of claim 53, wherein Y^3-L^C is selected from the group consisting of:

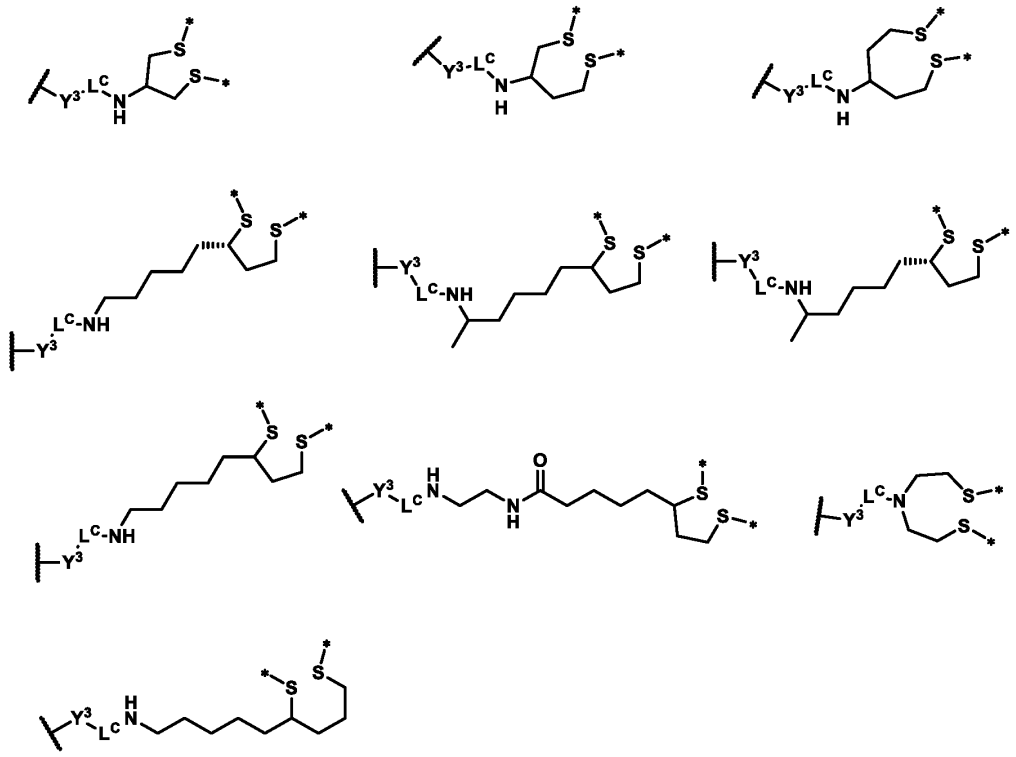



;

wherein * represents covalent attachment to Y^1; and the wavy line represents the covalent attachment to M^1 or another M^2.

57. The ADC compound of any one of claims 53-56, wherein Y^1 is –NH-; L^B is present; Y^2 is CH; and X^1 and X^2 are each –S-.

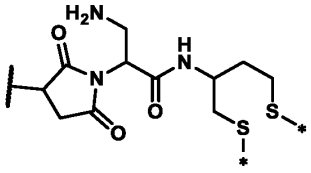
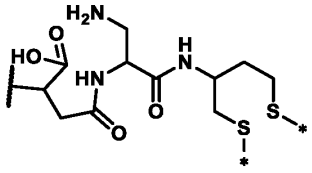
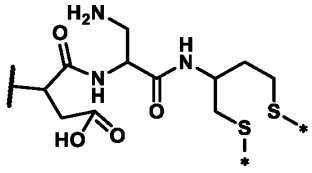
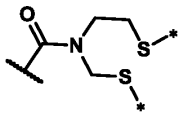
58. The ADC compound of any one of claims 53-56, wherein Y^1 is a bond; L^B is absent; Y^2 is N; and X^1 and X^2 are each –NH.

59. The ADC compound of any one of claims 43-52, wherein M^2 is selected from the group consisting of:



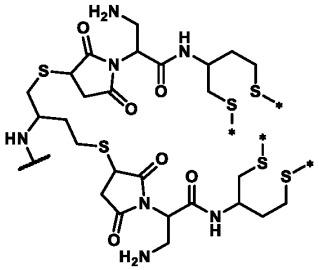
; wherein each * represents the covalent attachment to L^2-D or another M^2; and the wavy bond presents the covalent attachment to M^1 or another M^2.

60. The ADC compound of any one of claims 43-52, wherein M^2 is selected from the group consisting of:

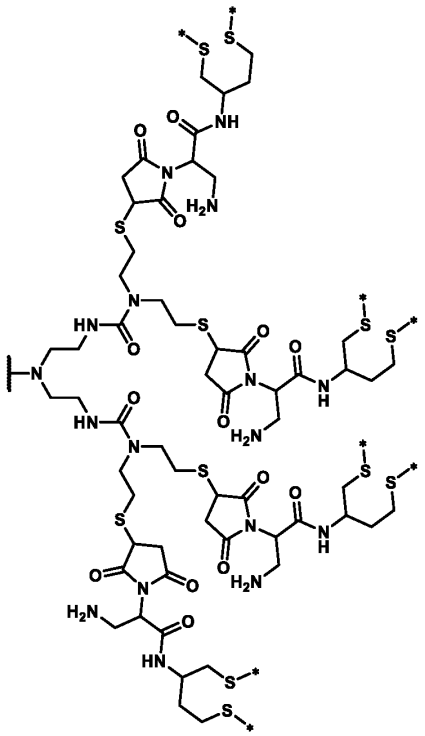
wherein each * represents the covalent attachment to L^2-D or another M^2; and the wavy bond presents the covalent attachment to M^1 or another M^2.

61. The ADC compound of any one of claims 43-52, wherein subscript x is 2; and $(M)_x$ is:



wherein each * represents the covalent attachment to L^2-D; the wavy line represents the covalent attachment to L^1; and each succinimide ring is in hydrolyzed form.

62. The ADC compound of any one of claims 1-36, wherein subscript x is 3; and $(M)_x$ is:



wherein each * represents the covalent attachment to L^2-D; and each succinimide ring is in hydrolyzed form.

63. The ADC compound of any one of claims 1-36, wherein subscript x is 0.

64. The ADC compound of any one of claims 1-63, wherein L^2 is substituted with a PEG Unit ranging from PEG2 to PEG36.

65. The ADC compound of any one of claims 1-63, wherein L^2 is not substituted with a PEG Unit.

66. The ADC compound of any one of claims 1-63, wherein L^2 has the formula $-(Q)_q-(A)_a-(W)_w-(Y)_y$, wherein:

A is a C_{2-20} alkylene optionally substituted with 1-3 R^{a1}; or a 2 to 40 membered heteroalkylene optionally substituted with 1-3 R^{b1};

each R^{a1} is independently selected from the group consisting of: C_{1-6} alkyl, C_{1-6} haloalkyl, C_{1-6} alkoxy, C_{1-6} haloalkoxy, halogen, -OH, =O, $-NR^{d1}R^{e1}$, -(C_{1-6} alkylene)-$NR^{d1}R^{e1}$, $-C(=O)NR^{d1}R^{e1}$, -C(=O)(C_{1-6} alkyl), and -C(=O)O(C_{1-6} alkyl);

each R^{b1} is independently selected from the group consisting of: C_{1-6} alkyl, C_{1-6} haloalkyl, C_{1-6} alkoxy, C_{1-6} haloalkoxy, halogen, -OH, $-NR^{d1}R^{e1}$, -(C_{1-6} alkylene)-$NR^{d1}R^{e1}$, $-C(=O)NR^{d1}R^{e1}$, -C(=O)(C_{1-6} alkyl), and -C(=O)O(C_{1-6} alkyl);

each R^{d1} and R^{e1} are independently hydrogen or C_{1-3} alkyl;

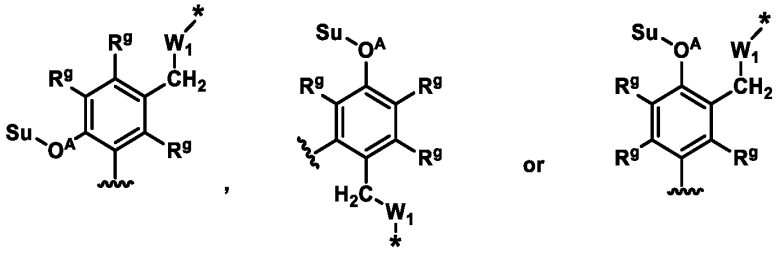
Q is a succinimide or hydrolyzed succinimide;

subscript q is 0 or 1;

subscript a is 0 or 1;

subscript w is 0 or 1;

wherein when subscript w is 1 then W is from 1-12 amino acids or has the structure:



wherein Su is a Sugar moiety;

$-O^{A}-$ represents the oxygen atom of a glycosidic bond;

each R^{g} is independently hydrogen, halogen, -CN, or $-NO_2$;

W^1 is selected from the group consisting of: a bond, -O-, -NH-, -N(C_{1-6} alkyl)-, $-[N(C_{1-6}\text{ alkyl})_2]^+-$, and -OC(=O)-;

the wavy line represents the covalent attachment to A, Q, or L^1; and

the * represents the covalent attachment to Y or D;

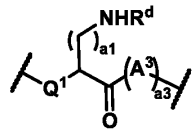
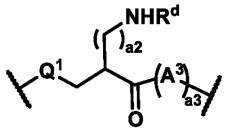
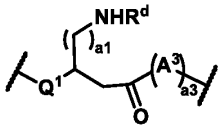
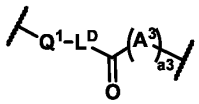
y is 0 or 1; and

Y is a self-immolative or non-self-immolative moiety; and y is 0 or 1.

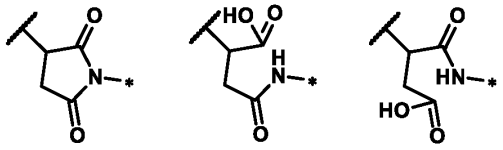
67. The ADC compound of any one of claims 1-66, wherein each L^2-D is uncharged.

68. The ADC compound of any one of claims 1-66, wherein each L^2-D has a net zero charge.

69. The ADC compound of any one of claims 66-68, wherein Q-A is selected from the group consisting of:

wherein Q^1 is selected from the group consisting of:



, wherein the wavy line adjacent to Q^1 represents covalent attachment to $(M)_x$;

subscript a1 is 1-4;

subscript a2 is 0-3;

subscript a3 is 0 or 1;

L^D is a C_{1-6} alkylene;

A^3 is -NH-(C_{1-10} alkylene)-C(=O)- or -NH-(2-20 membered heteroalkylene)-C(=O)-, wherein the C_{1-6} alkylene is optionally substituted with 1-3 independently selected R^a, and the 2-20 membered heteroalkylene is optionally substituted with 1-3 independently selected R^b; and

wherein A^3 is further optionally substituted with a PEG Unit selected from PEG8 to PEG24.

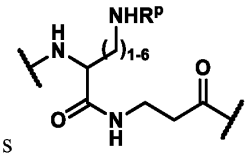
70. The ADC compound of claim 69, wherein subscript a3 is 1.

71. The ADC compound of any one of claims 68-70, wherein A^3 is -NH-(C_{1-10} alkylene)-C(=O)-.

72. The ADC compound of any one of claims 68-70, wherein A^3 is –NH-(CH_2CH_2)-C(=O)-.

73. The ADC compound of any one of claims 68-70, wherein A^3 is -NH-(2-20 membered heteroalkylene)-C(=O)-, wherein the 2-20 membered heteroalkylene is optionally substituted with 1-3 independently selected R^b; and

wherein A^3 is further optionally substituted with a PEG Unit selected from PEG8 to PEG24.

74. The ADC compound of claim 69, wherein A^3 is , wherein R^p is selected from PEG2 to PEG24.

75. The ADC compound of claim 74, wherein R^p is PEG12.

76. The ADC compound of claim 74, wherein the PEG Unit R^p comprises a -(C_{1-6} alkylene)C(=O)- group, the carbonyl carbon atom of which provides covalent attachment of R^p to the nitrogen atom.

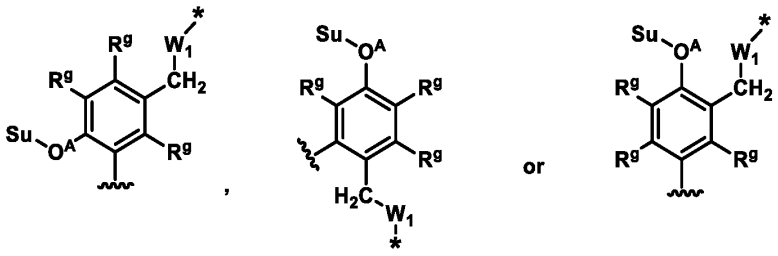
77. The ADC compound of any one of claims 66-76, wherein W is from 2 to 12 amino acids independently selected from natural and unnatural amino acids.

78. The ADC compound of claim 77, wherein W is a dipeptide.

79. The ADC compound of any one of claims 66-78, wherein the bond between W, and D or Y, is enzymatically cleavable by a tumor-associated protease.

80. The ADC compound of claim 79, wherein the tumor-associate protease is a cathepsin.

81. The ADC compound of any one of claims 66-76, wherein W has the structure of:



wherein Su is a Sugar moiety;

$-O^A-$ represents the oxygen atom of a glycosidic bond;

each R^g is independently hydrogen, halogen, -CN, or $-NO_2$;

W^1 is selected from the group consisting of: a bond, -O-, -C(=O)-, $-S(O)_{0-2}-$, -NH-, $-N(C_{1-6}$ alkyl)-, $-[N(C_{1-6}$ alkyl$)_2]^+-$, -OC(=O)-, -NHC(=O)-, -C(=O)O-, and -C(=O)NH-;

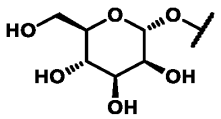
the wavy line represents the covalent attachment to A, Q, or L^1; and

the * represents the covalent attachment to Y or D.

82. The ADC compound of any one of claims 66-75 and 81, wherein O^A-Su is charge neutral at physiological pH.

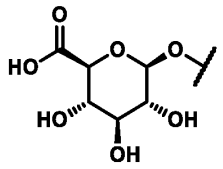
83. The ADC compound of any one of claims 66-75 and 81-82, wherein Su of O^A-Su is mannose.

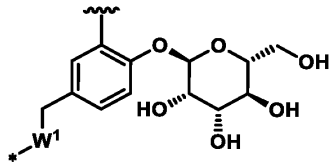
84. The ADC compound of any one of claims 66-75 and 81, wherein O^A-Su is

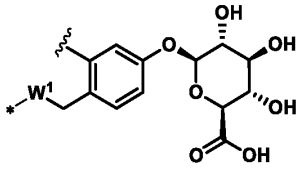
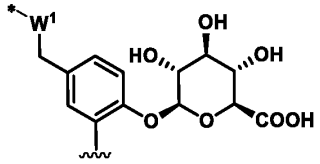


85. The ADC compound of any one of claims 66-75 and 81, wherein Su of O^A-Su comprises a carboxylate moiety.

86. The ADC compound of any one of claims 66-75, 81, and 85, wherein Su of O^A-Su is glucuronic acid.

87. The ADC compound of claim 77, wherein O^A-Su is .

88. The ADC compound of any one of claims 66-75 and 81, wherein W is .

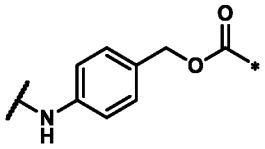
89. The ADC compound of any one of claims 66-75 and 81, wherein W is  or .

90. The ADC compound of any one of claims 66-89, wherein W^1 is a bond.

91. The ADC compound of any one of claims 66-89, wherein W^1 is -O(C=O)-.

92. The ADC compound of any one of claims 66-91, wherein subscript y is 0.

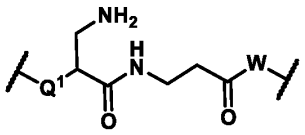
93. The ADC compound of claims 66-91, wherein subscript y is 1; and Y is



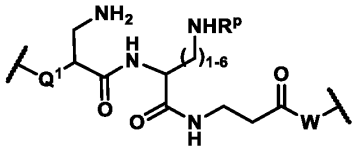
, wherein the wavy line represents covalent attachment to W or A; and

the * represents covalent attachment to D.

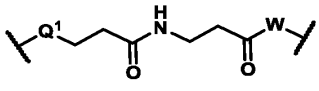
94. The ADC compound of any one of claims 66-68, wherein Q-A is



,



, or



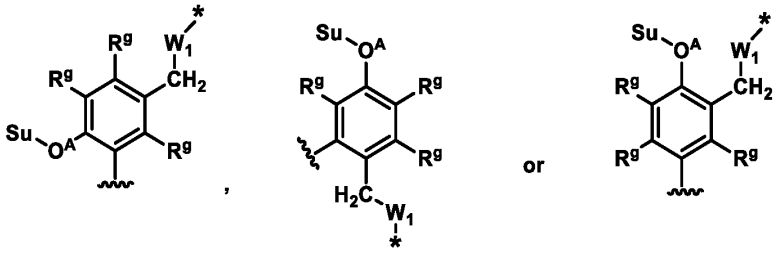
,

wherein R^p is PEG8 to PEG24,

95. The ADC compound of claim 94, wherein R^p is PEG12.

96. The ADC compound of claim 94 or 95, wherein the PEG Unit R^p comprises a -(C_{1-6} alkylene)C(=O)- group, the carbonyl carbon atom of which provides covalent attachment of R^P to the nitrogen atom.

97. The ADC compound of any one of claims 66-76, 81, and 92-96, wherein W has the structure of:



wherein Su is a Sugar moiety;

$-O^A-$ represents the oxygen atom of a glycosidic bond;

each R^g is independently hydrogen, halogen, -CN, or $-NO_2$;

W^1 is selected from the group consisting of: a bond, -O-, -C(=O)-, $-S(O)_{0-2}-$, -NH-, $-N(C_{1-6}$ alkyl)-, and $-[N(C_{1-6}$ alkyl$)_2]^+-$;

the wavy line represents the covalent attachment to A, Q, or L^1; and

the * represents the covalent attachment to Y or D.

98. The ADC compound of any one of claims 66, 81, and 96, wherein each R^g is hydrogen or one R^g is halogen, -CN, or $-NO_2$ and each remaining R^g is hydrogen.

99. The ADC compound of claim 97, wherein W^1 is -OC(=O)-; and O^A-Su is charged neutral.

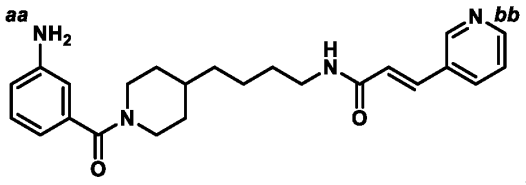
100. The ADC compound of claim 97, wherein W^1 is a bond; D is conjugated to W through a nitrogen atom which forms an ammonium cation at physiological pH; and O^A-Su comprises a carboxylate.

101. The ADC compound of any one of claims 1-100 wherein D is a hydrophilic Drug Unit.

102. The ADC compound of any one of claims 1-101, wherein D is from a cytotoxic agent.

103. The ADC compound of any one of claims 1-100 wherein D is from gemcitabine, MMAE, or MMAF.

104. The ADC compound of any one of claims 1-100 wherein D is a from a NAMPT inhibitor.

105. The ADC compound of any one of claims 1-100 and 104, wherein D has the following formula: 

, wherein D is covalently attached to L^2 at the aa or bb position.

106. The ADC compound of any one of claims 1-105, wherein each L^2-D has zero net charge at physiological pH.

107. The ADC compound of any one of claims 1-106, wherein each L^2-D has no charged species at physiological pH.

108. The ADC compound of any one of claims 1-105, wherein each L^2-D is zwitterionic at physiological pH.

109. The ADC compound of claims 1-106 and 108, wherein each L^2-D comprises a carboxylate and an ammonium.

110. The ADC compound of claim 109, wherein the ammonium is a quaternary ammonium.

111. The ADC compound of claim 110, wherein the quaternary ammonium is pyridinium.

112. The ADC compound of any one of claims 1-106, wherein L^2 is anionic; and D is cationic.

113. The ADC compound of any one of claims 1-106 and 108-109, wherein L^2 comprises a carboxylate; and D comprises an ammonium.

114. The ADC compound of any one of claims 1-113, wherein the ratio of D to Ab is 8:1.

115. The ADC compound of any one of claims 1-113, wherein the ratio of D to Ab is 16:1 to 64:1

116. The ADC compound of any one of claims 1-113, wherein the ratio of D to Ab is 16:1 to 32:1.

117. The ADC compound of any one of claims 1-113, wherein the ratio of D to Ab is 16:1.

118. The ADC of any one of claims 1-113, wherein the ratio of D to Ab is 8:1; subscript y of $(L^2\text{-}D)_y$ is 4; and subscript p is 2.

119. The ADC of any one of claims 1-113, wherein the ratio of D to Ab is 8:1; y of $(L^2\text{-}D)_y$ is 2; and subscript p is 4.

120. The ADC of any one of claims 1-113, wherein the ratio of D to Ab is 16:1; y of $(L^2\text{-}D)_y$ is 8; and subscript p is 2.

121. The ADC of any one of claims 1-113, wherein the ratio of D to Ab is 16:1; y of $(L^2\text{-}D)_y$ is 4; and subscript p is 4.

122. The ADC of any one of claims 1-113, wherein the ratio of D to Ab is 16:1; y of $(L^2\text{-}D)_y$ is 2; and subscript p is 8.

123. The ADC of any one of claims 1-122, wherein the total number of charges for each instance of $(M)_x\text{-}(L^2\text{-}D)_y$ is an even number at physiological pH.

124. The ADC of any one of claims 1-123, wherein the total number of charges for each instance of $(M)_x\text{-}(L^2\text{-}D)_y \geq 2(x + 2y)$ at physiological pH.

125. The ADC of any one of claims 1-124, wherein the total number of charges for each instance of $(M)_x\text{-}(L^2\text{-}D)_y$ is $2(x + 2y)$ at physiological pH.

126. A composition comprising the ADC of any one of claims 1-125, or a pharmaceutically acceptable salt thereof.

127. A method of treating cancer in a subject in need thereof, comprising administering to the subject a therapeutically effective amount of the ADC of any one of claims 1-125, or a pharmaceutically acceptable salt thereof, or the composition of claim 126.

128. A method of treating an autoimmune disorder in a subject in need thereof, comprising administering to the subject a therapeutically effective amount of the ADC of any one of claims 1-125, or a pharmaceutically acceptable salt thereof, or the composition of claim 126.