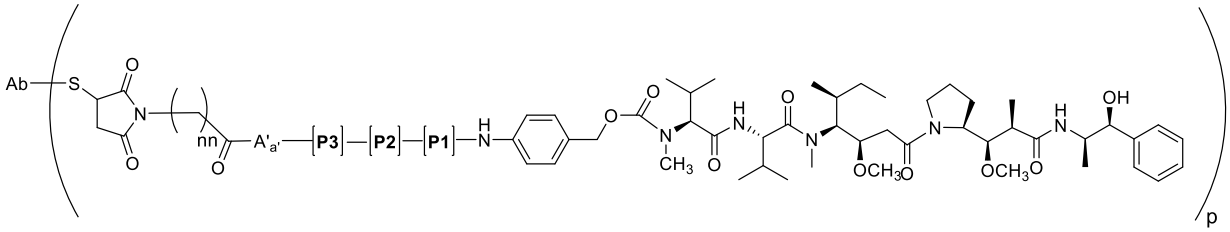
SUMMARY

[0018a] In a first aspect of the present disclosure, there is provided an antibody-drug conjugate comprising an antigen binding protein or fragment thereof that binds CD30, wherein the antibody-drug conjugate is represented by the structure:



or a pharmaceutically acceptable salt thereof, wherein:

Ab is the antigen binding protein or fragment thereof and p denotes a number from 1 to 12;

subscript nn is a number from 1 to 5;

subscript a' is 0, and A' is absent;

P1, P2, and P3 are each an amino acid, wherein:

a first one of the amino acids P1, P2, or P3 is negatively charged;

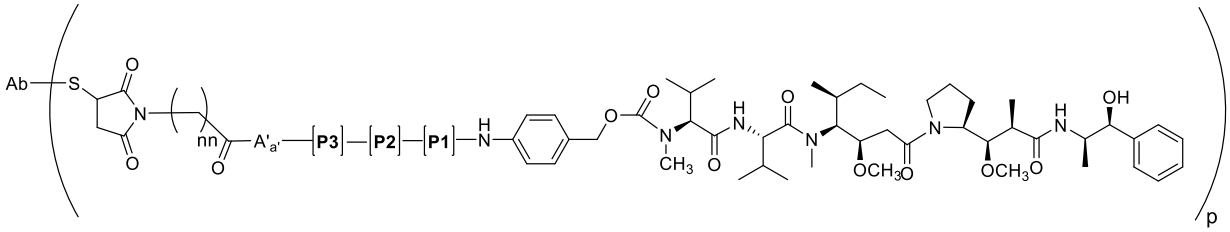
a second one of the amino acids P1, P2, or P3 has an aliphatic side chain with hydrophobicity no greater than that of leucine; and

a third one of the amino acids P1, P2, or P3 has hydrophobicity lower than that of leucine,

wherein the first one of the amino acids P1, P2, or P3 corresponds to any one of P1, P2, or P3, the second one of the amino acids P1, P2, or P3 corresponds to one of the two remaining amino acids P1, P2, or P3, and the third one of the amino acids P1, P2, or P3 corresponds to the last remaining amino acids P1, P2, or P3,

provided that -P3-P2-P1- is not -Glu-Val-Cit- or -Asp-Val-Cit-.

[0018b] In another aspect of the present disclosure, there is provided an antibody-drug conjugate comprising an antigen binding protein or fragment thereof that binds GPNMB, wherein the antibody-drug conjugate is represented by the structure:



or a pharmaceutically acceptable salt thereof, wherein:

Ab is the antigen binding protein or fragment thereof and p denotes a number from 1 to 12;

subscript nn is a number from 1 to 5;

subscript a' is 0, and A' is absent;

P1, P2, and P3 are each an amino acid, wherein:

a first one of the amino acids P1, P2, or P3 is negatively charged;

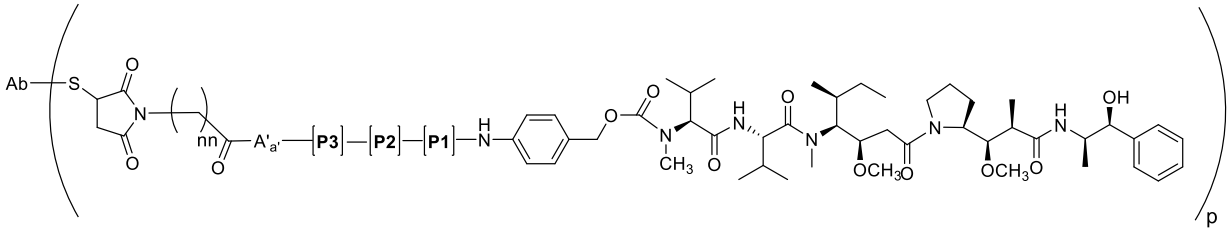
a second one of the amino acids P1, P2, or P3 has an aliphatic side chain with hydrophobicity no greater than that of leucine; and

a third one of the amino acids P1, P2, or P3 has hydrophobicity lower than that of leucine,

wherein the first one of the amino acids P1, P2, or P3 corresponds to any one of P1, P2, or P3, the second one of the amino acids P1, P2, or P3 corresponds to one of the two remaining amino acids P1, P2, or P3, and the third one of the amino acids P1, P2, or P3 corresponds to the last remaining amino acids P1, P2, or P3,

provided that -P3-P2-P1- is not -Glu-Val-Cit- or -Asp-Val-Cit-.

[0018c] In yet another aspect of the present disclosure, there is provided an antibody-drug conjugate comprising an antigen binding protein or fragment thereof that binds CD228, wherein the antibody-drug conjugate is represented by the structure:



or a pharmaceutically acceptable salt thereof, wherein:

Ab is the antigen binding protein or fragment thereof and p denotes a number from 1 to 12;

subscript nn is a number from 1 to 5;

subscript a' is 0, and A' is absent;

P1, P2, and P3 are each an amino acid, wherein:

a first one of the amino acids P1, P2, or P3 is negatively charged;

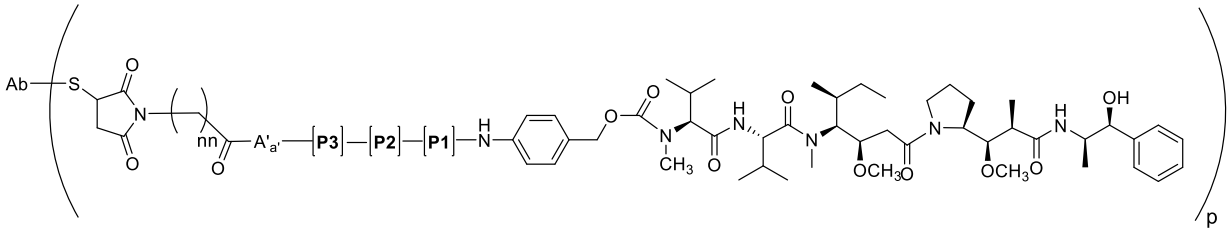
a second one of the amino acids P1, P2, or P3 has an aliphatic side chain with hydrophobicity no greater than that of leucine; and

a third one of the amino acids P1, P2, or P3 has hydrophobicity lower than that of leucine,

wherein the first one of the amino acids P1, P2, or P3 corresponds to any one of P1, P2, or P3, the second one of the amino acids P1, P2, or P3 corresponds to one of the two remaining amino acids P1, P2, or P3, and the third one of the amino acids P1, P2, or P3 corresponds to the last remaining amino acids P1, P2, or P3,

provided that -P3-P2-P1- is not -Glu-Val-Cit- or -Asp-Val-Cit-.

[0018d] In a further aspect of the present disclosure, there is provided an antibody-drug conjugate comprising an antigen binding protein or fragment thereof that binds αvβ6, wherein the antibody-drug conjugate is represented by the structure:



or a pharmaceutically acceptable salt thereof, wherein:

Ab is the antigen binding protein or fragment thereof and p denotes a number from 1 to 12;

subscript nn is a number from 1 to 5;

subscript a' is 0, and A' is absent;

P1, P2, and P3 are each an amino acid, wherein:

a first one of the amino acids P1, P2, or P3 is negatively charged;

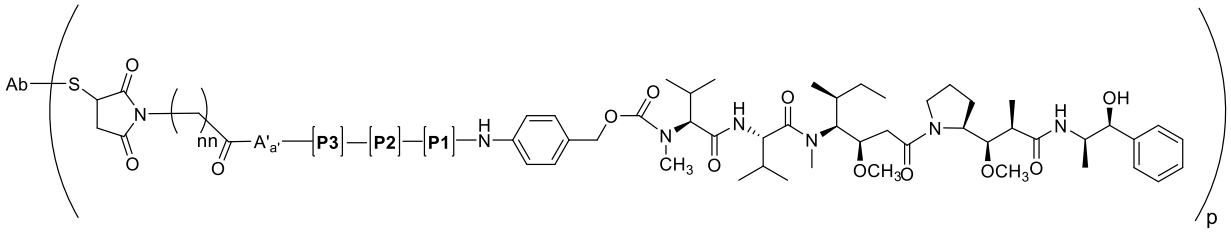
a second one of the amino acids P1, P2, or P3 has an aliphatic side chain with hydrophobicity no greater than that of leucine; and

a third one of the amino acids P1, P2, or P3 has hydrophobicity lower than that of leucine,

wherein the first one of the amino acids P1, P2, or P3 corresponds to any one of P1, P2, or P3, the second one of the amino acids P1, P2, or P3 corresponds to one of the two remaining amino acids P1, P2, or P3, and the third one of the amino acids P1, P2, or P3 corresponds to the last remaining amino acids P1, P2, or P3,

provided that -P3-P2-P1- is not -Glu-Val-Cit- or -Asp-Val-Cit-.

[0018e] In another aspect of the present disclosure, there is provided an antibody-drug conjugate comprising an antigen binding protein or fragment thereof that binds LIV1, wherein the antibody-drug conjugate is represented by the structure:



or a pharmaceutically acceptable salt thereof, wherein:

Ab is the antigen binding protein or fragment thereof and p denotes a number from 1 to 12;

subscript nn is a number from 1 to 5;

subscript a' is 0, and A' is absent;

P1, P2, and P3 are each an amino acid, wherein:

a first one of the amino acids P1, P2, or P3 is negatively charged;

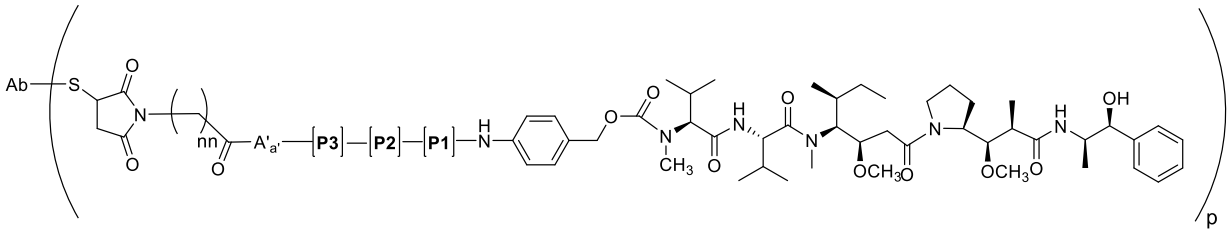
a second one of the amino acids P1, P2, or P3 has an aliphatic side chain with hydrophobicity no greater than that of leucine; and

a third one of the amino acids P1, P2, or P3 has hydrophobicity lower than that of leucine,

wherein the first one of the amino acids P1, P2, or P3 corresponds to any one of P1, P2, or P3, the second one of the amino acids P1, P2, or P3 corresponds to one of the two remaining amino acids P1, P2, or P3, and the third one of the amino acids P1, P2, or P3 corresponds to the last remaining amino acids P1, P2, or P3,

provided that -P3-P2-P1- is not -Glu-Val-Cit- or -Asp-Val-Cit-.

[0018f] In yet another aspect of the present disclosure, there is provided an antibody-drug conjugate comprising an antigen binding protein or fragment thereof that binds CD19, wherein the antibody-drug conjugate is represented by the structure:



or a pharmaceutically acceptable salt thereof, wherein:

Ab is the antigen binding protein or fragment thereof and p denotes a number from 1 to 12;

subscript nn is a number from 1 to 5;

subscript a' is 0, and A' is absent;

P1, P2, and P3 are each an amino acid, wherein:

a first one of the amino acids P1, P2, or P3 is negatively charged;

a second one of the amino acids P1, P2, or P3 has an aliphatic side chain with hydrophobicity no greater than that of leucine; and

a third one of the amino acids P1, P2, or P3 has hydrophobicity lower than that of leucine,

wherein the first one of the amino acids P1, P2, or P3 corresponds to any one of P1, P2, or P3, the second one of the amino acids P1, P2, or P3 corresponds to one of the

two remaining amino acids P1, P2, or P3, and the third one of the amino acids P1, P2, or P3 corresponds to the last remaining amino acids P1, P2, or P3,
provided that -P3-P2-P1- is not -Glu-Val-Cit- or -Asp-Val-Cit-.

[0018g] In a further aspect of the present disclosure, there is provided a pharmaceutical composition comprising the antibody-drug conjugate disclosed herein and a pharmaceutically acceptable carrier.

[0018h] In another aspect of the present disclosure, there is provided a use of an antibody-drug conjugate disclosed herein in the manufacture of a medicament for treating a CD30-expressing disease or condition.

[0018i] In yet another aspect of the present disclosure, there is provided a use of an antibody-drug conjugate disclosed herein in the manufacture of a medicament for treating a GPNMB-expressing disease or condition.

[0018j] In a further aspect of the present disclosure, there is provided a use of an antibody-drug conjugate disclosed herein in the manufacture of a medicament for treating a CD228-expressing cancer.

[0018k] In another aspect of the present disclosure, there is provided a use of an antibody-drug conjugate disclosed herein in the manufacture of a medicament for treating a αvβ6-expressing cancer.

[0018l] In yet another aspect of the present disclosure, there is provided a use of an antibody-drug conjugate disclosed herein in the manufacture of a medicament for treating a LIV1-expressing cancer.

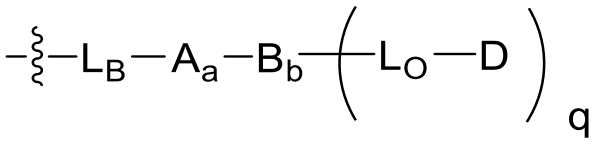
[0018m] In a further aspect of the present disclosure, there is provided a use of an antibody-drug conjugate disclosed herein in the manufacture of a medicament for treating a CD19-expressing cancer.

[0018n] In another aspect of the present disclosure, there is provided a Ligand Drug Conjugate composition represented by Formula 1:

$$L\text{-}[LU\text{-}D']_p \qquad (1)$$

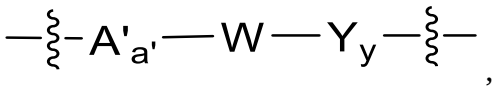
or a pharmaceutically acceptable salt thereof, wherein
L is a Ligand Unit;
LU is a Linker Unit;
D' represents from 1 to 4 Drug Units (D) in each drug linker moiety of formula -LU-D'; and

subscript p is a number from 1 to 12, from 1 to 10 or from 1 to 8 or is about 4 or about 8,
wherein the Ligand Unit is from an antibody or an antigen-binding fragment of an antibody,
wherein the antibody or the antigen-binding fragment is capable of selective binding to an antigen of tumor tissue for subsequent release of the Drug Unit(s) as a free drug,
wherein the drug linker moiety of formula -LU-D' in each of the Ligand Drug Conjugate compounds of the composition has the structure of Formula 1A:



(1A)

or a salt thereof,
wherein the wavy line indicates covalent attachment to L;
D is the Drug Unit;
L_B is a ligand covalent binding moiety;
A is a first optional Stretcher Unit;
subscript a is 0 or 1, indicating the absence or presence of A, respectively;
B is an optional Branching Unit;
subscript b is 0 or 1, indicating the absence or presence of B, respectively;
L_O is a secondary linker moiety, wherein the secondary linker has the formula of;



,

wherein the wavy line adjacent to Y indicates the site of covalent attachment of L_O to the Drug Unit and the wavy line adjacent to A' indicates the site of covalent attachment of L_O to the remainder of the drug linker moiety;
A' is a second optional Stretcher Unit, which when present and in the absence of B becomes a subunit of A,
subscript a' is 0 or 1, indicating the absence or presence of A', respectively,

W is a Peptide Cleavable Unit, wherein the Peptide Cleavable Unit comprises a tripeptide having the sequence -P3-P2-P1-, wherein P1, P2, and P3 are each an amino acid, wherein:
a first one of the amino acids P1, P2, or P3 is negatively charged or is serine;
a second one of the amino acids P1, P2, or P3 has an aliphatic side chain with hydrophobicity no greater than that of leucine, or is glycine or serine or proline; and

a third one of the amino acids P1, P2, or P3 has hydrophobicity lower than that of leucine, or is proline,

wherein the first one of the amino acids P1, P2, or P3 corresponds to any one of P1, P2, or P3, the second one of the amino acids P1, P2, or P3 corresponds to one of the two remaining amino acids P1, P2, or P3, and the third one of the amino acids P1, P2, or P3 corresponds to the last remaining amino acids P1, P2, or P3,

provided that -P3-P2-P1- is not -Glu-Val-Cit- or -Asp-Val-Cit-;

each Y when present is a self-immolative Spacer Unit;

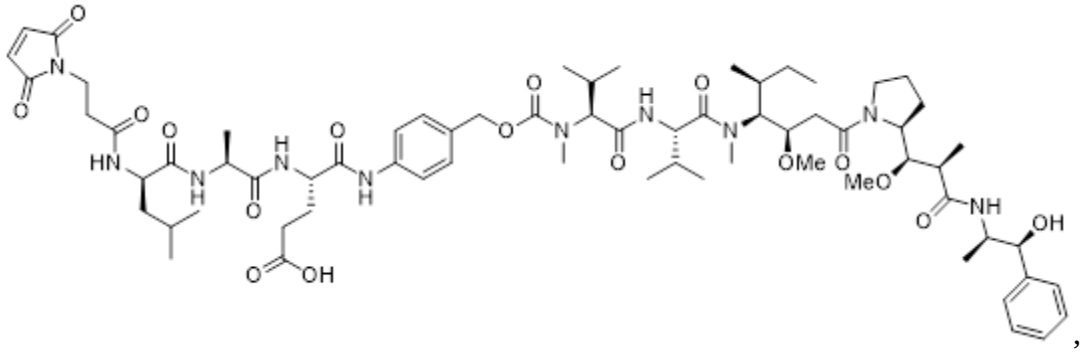
subscript y is 0, 1 or 2 indicating the absence or presence of 1 or 2 of Y, respectively; and

subscript q is an integer ranging from 1 to 3, and

provided that subscript q is 1 when subscript b is 0 and subscript q is 2 or 3 when subscript b is 1; and

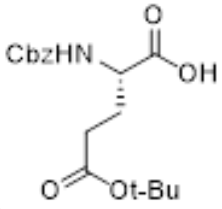
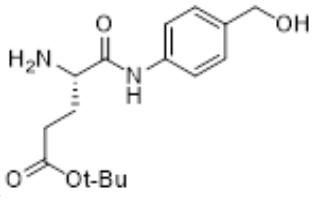
wherein the Ligand Drug Conjugate compounds of the composition have the structure of Formula A1 in which subscript p is replaced by subscript p', wherein subscript p' is an integer from 1 to 12, 1 to 10 or 1 to 8 or is 4 or 8.

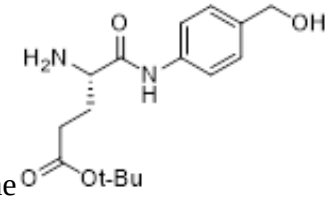
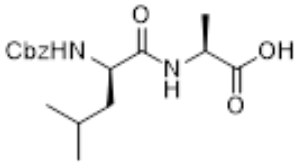
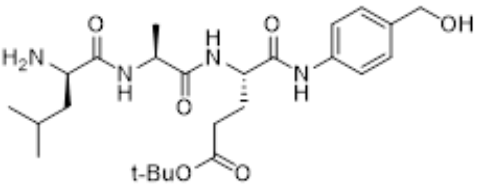
[0018o] In yet another aspect of the present disclosure, there is provided a method of preparing a compound having the structure of

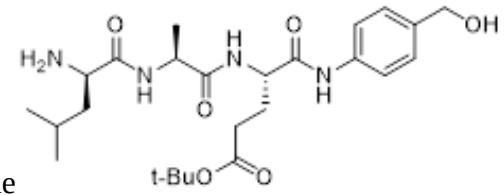
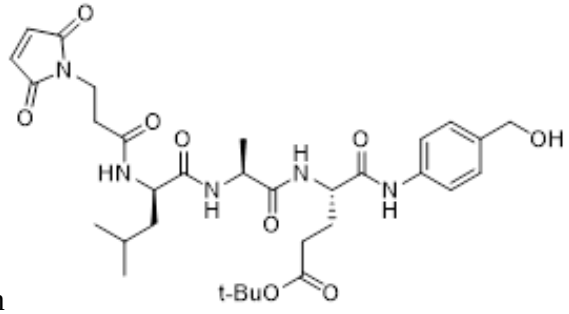


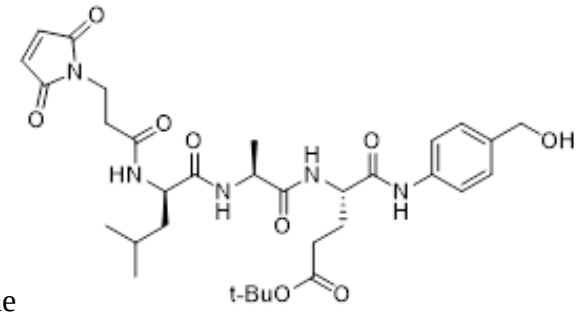
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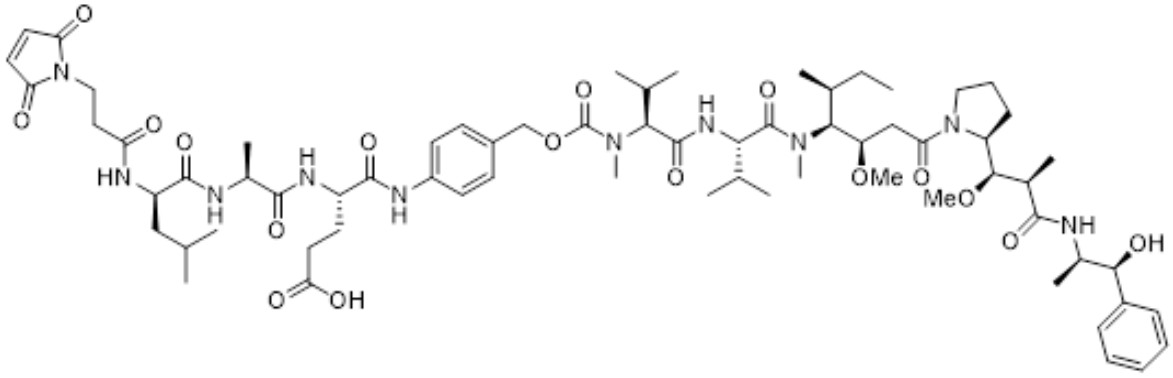
or a salt thereof, comprising

a) reacting  , or a salt thereof, with 4-aminobenzyl alcohol followed by reduction to form  , or a salt thereof;

b) reacting the  or salt thereof with  , or a salt thereof, followed by reduction to form  , or a salt thereof;

c) reacting the  or salt thereof with 3-maleimidopropionic acid to form  , or a salt thereof; and

d) converting the  or salt thereof to the compound



or salt thereof.

[0018p] In a further aspect of the present disclosure, there is provided an antibody-drug conjugate disclosed herein, for use in therapy.

[0019] One principle example of the present disclosure provides a Ligand Drug Conjugate composition represented by Formula 1:

L-[LU-D']p (**1**)

or a salt thereof, in particular a pharmaceutically acceptable salt, wherein

L is a Ligand Unit;

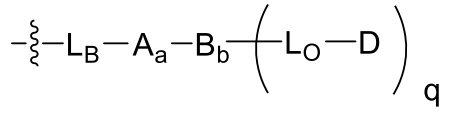
LU is a Linker Unit; and

D' represents from 1 to Drug Units (D) in each drug linker moiety of formula -LU-D'; and

subscript p is a number from 1 to 12, from 1 to 10 or from 1 to 8 or is about 4 or about 8,

wherein the Ligand Unit is of an antibody, or an antigen-binding fragment of an antibody, that is capable of selective binding to an antigen of tumor tissue for subsequent release of the Drug Unit as free cytotoxic compound,

wherein the drug linker moiety of formula -LU-D' in each of the Ligand Drug Conjugate compounds of the composition has the structure of Formula **1A**:



(1A)

or a salt thereof, in particular a pharmaceutically acceptable salt,

wherein the wavy line indicates covalent attachment to L;

D is the Drug Unit of the cytotoxic compound;

L_B is a ligand covalent binding moiety;

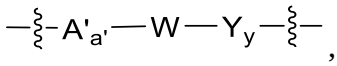
A is a first optional Stretcher Unit;

subscript a is 0 or 1 indicating the absence or presence of A, respectively;

B is an optional Branching Unit;

subscript b is 0 or 1, indicating the absence or presence of B, respectively;

L_O is a secondary linker moiety, wherein the secondary linker has the formula of;



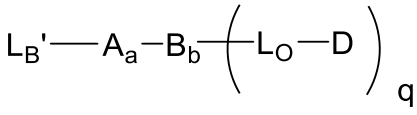
wherein the wavy line adjacent to Y indicates the site of covalent attachment of L_O to the Drug Unit and the wavy line adjacent to A' indicates the site of covalent attachment to the remainder of the drug linker moiety;

A' is a second optional Stretcher Unit, which in the absence of B becomes a subunit of A,

[0020] A related principle example provides for a Drug Linker compound of Formula **I**:

$$LU'\text{-}(D') \qquad (\mathbf{I})$$

[0021] or a salt thereof, in particular a pharmaceutically acceptable salt thereof, wherein LU' is capable of providing a covalent bond between L and LU of Formula **1**, and therefore is sometimes referred to as a Linker Unit precursor; and D' represents from 1 to 4 Drug Units, wherein the Drug Linker compound is further defined by the structure of Formula **IA**:



(**IA**)

[0022] wherein L_B' is capable of transformation to L_B of Formula **1A** thereby forming a covalent bond to L of Formula **1**, and therefore is sometimes referred to a ligand covalent binding precursor moiety, and the remaining variable groups of Formula **IA** are as defined for Formula **1A**.

[0023] In some examples, provided herein is a Ligand Drug Conjugate composition represented by Formula **1**:

$$L\text{-}[LU\text{-}D']_p \qquad (\mathbf{1})$$

or a pharmaceutically acceptable salt thereof, wherein

L is a Ligand Unit;

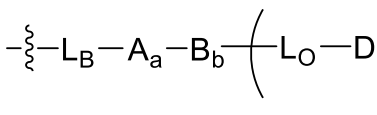
LU is a Linker Unit;

D' represents from 1 to 4 Drug Units (D) in each drug linker moiety of formula -LU-D'; and

subscript p is a number from 1 to 12, from 1 to 10 or from 1 to 8 or is about 4 or about 8,

wherein the Ligand Unit is from an antibody or an antigen-binding fragment of an antibody that is capable of selective binding to an antigen of tumor tissue for subsequent release of the Drug Unit(s) as free drug,

wherein the drug linker moiety of formula -LU-D' in each of the Ligand Drug Conjugate compounds of the composition has the structure of Formula **1A**:



(**1A**)

or a salt thereof, in particular a pharmaceutically acceptable salt,

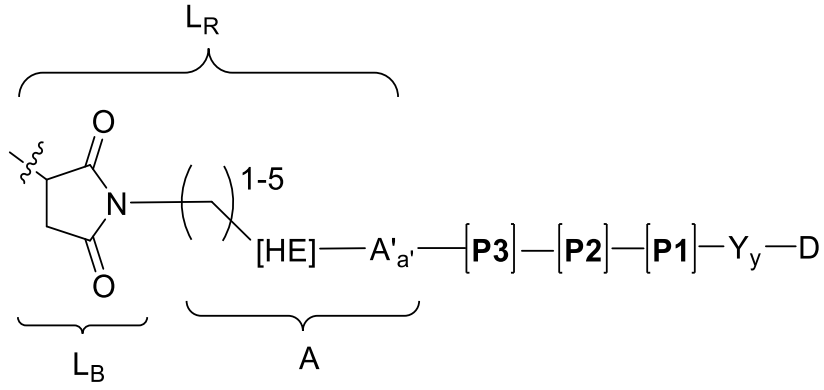
wherein the wavy line indicates covalent attachment to L;

D is the Drug Unit;

wherein the Ligand Drug Conjugate compounds of the composition have the structure of Formula **1** in which subscript p is replaced by subscript p', wherein subscript p' is independently an integer from 1 to 12, 1 to 10 or 1 to 8 or is 4 or 8.

[0024] In some examples, a first one of the amino acids P1, P2, or P3 is negatively charged; a second one of the amino acids P1, P2, or P3 has an aliphatic side chain with hydrophobicity no greater than that of leucine; and a third one of the amino acids P1, P2, or P3 has hydrophobicity lower than that of leucine.

[0025] In some examples, provided herein is the Ligand Drug Conjugate composition of Formula **1**, wherein the Ligand Drug Conjugate compounds in the Ligand Drug Conjugate composition predominately have drug linker moieties of Formula 1H:



(Formula 1H)

or pharmaceutically acceptable salts thereof, and optionally having a minority of Ligand Drug Conjugate compounds in which one or more of the drug linker moieties in each of such compounds has its succinimide ring in hydrolyzed form and wherein

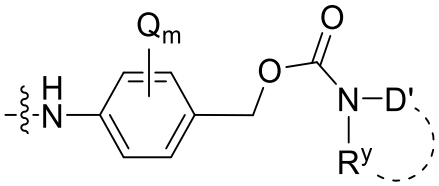
HE is a Hydrolysis Enhancing Unit;

A' is a subunit, when present, of the indicated first Stretcher Unit (A); subscript a' is 0 or 1, indicating the absence or presence of A'; and

the wavy line indicates the site of covalent binding to a sulfur atom of the Ligand Unit.

[0026] In some examples, which may be combined with any of the preceding examples, provided herein is the Ligand Drug Conjugate composition wherein HE is –(C=O).

[0027] In some examples, which may be combined with any of the preceding examples, provided herein is the Ligand Drug Conjugate composition wherein -Y_y-D has the structure of:



wherein -N(R^y)D' represents D, wherein D' is the remainder of D;

the wavy line indicates the site of covalent attachment to P1;

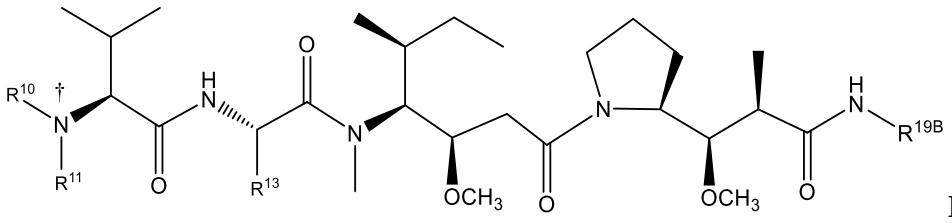
the dotted line indicates optional cyclization of R^y to D';

R^y is optionally substituted C_1-C_6 alkyl in absence of cyclization to D' or optionally substituted C_1-C_6 alkylene when cyclized to D';

each Q is independently selected from the group consisting of -C_1-C_8 alkyl, -O-(C_1-C_8 alkyl), halogen, nitro and cyano; and

subscript m is 0, 1 or 2.

[0028] In some examples, which may be combined with any of the preceding examples, provided herein is the Ligand Drug Conjugate composition wherein D is a cytotoxic drug wherein the cytotoxic drug is a secondary amine-containing auristatin compound wherein the nitrogen atom of the secondary amine is the site of covalent attachment to the drug linker moiety and the secondary amine-containing auristatin compound has the structure of Formula **$D_{F/E-3}$**:



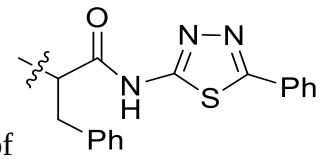
$D_{F/E-3}$

wherein the dagger indicates the site of covalent attachment of the nitrogen atom that provides the carbamate functional group;

one of R^{10} and R^{11} is hydrogen and the other is methyl;

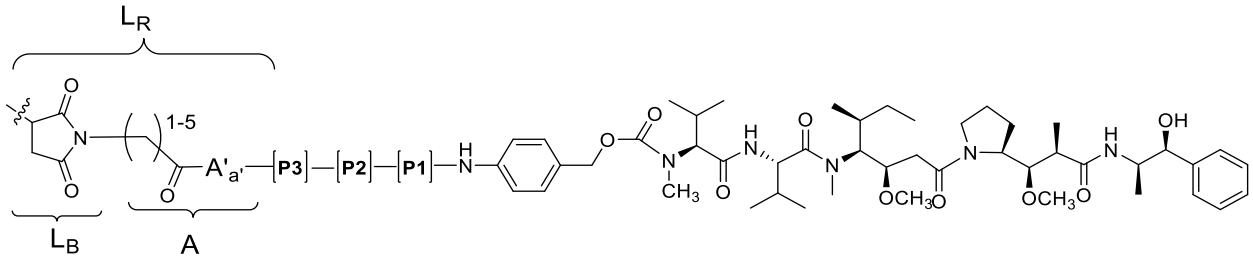
R^{13} is isopropyl or $–CH_2$-$CH(CH_3)_2$; and

R^{19B} is $–CH(CH_3)$-CH(OH)-Ph, $–CH(CO_2H)$-CH(OH)-CH_3, $–CH(CO_2H)$-CH_2Ph, -CH(CH_2Ph)-2-thiazolyl, -CH(CH_2Ph)-2-pyridyl, -CH(CH_2-p-Cl-Ph), -CH(CO_2Me)-CH_2Ph, -CH(CO_2Me)-$CH_2CH_2SCH_3$, -CH($CH_2CH_2SCH_3$)C(=O)NH-quinol-3-yl, -CH(CH_2Ph)C(=O)NH-p-Cl-Ph, or

R^{19B} has the structure of  , wherein the wavy line indicates covalent attachment to the remainder of the auristatin compound.

[0029] In some examples, which may be combined with any of the preceding examples, provided herein is the Ligand Drug Conjugate composition wherein the secondary amine-containing auristatin compound is monomethylauristatin E (MMAE) or monomethylauristatin F (MMAF).

[0030] In some examples, which may be combined with any of the preceding examples, provided herein is the Ligand Drug Conjugate composition wherein subscript q is 1 and the Ligand Drug Conjugate compounds in the Ligand Drug Conjugate composition predominately have drug linker moieties of Formula 1H-MMAE:



(Formula 1H-MMAE)

or a pharmaceutical acceptable salt thereof, and optionally having a minority of Ligand Drug Conjugate compounds in which one or more of the drug linker moieties in each of such compounds has its the succinimide ring in hydrolyzed form and wherein:

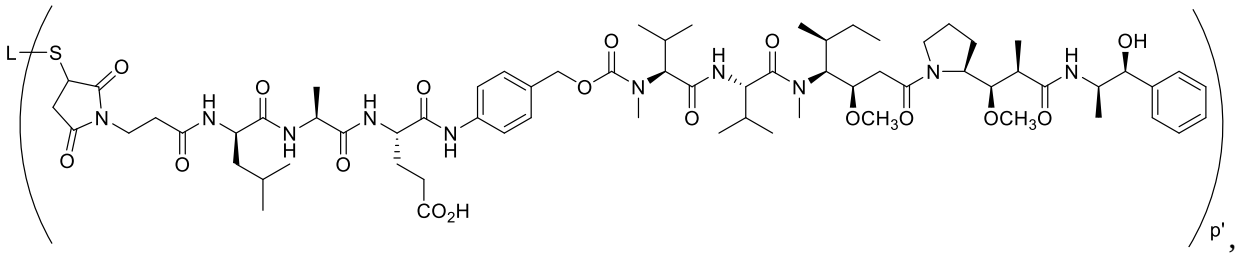
subscript a' is 0, and A' is absent; and

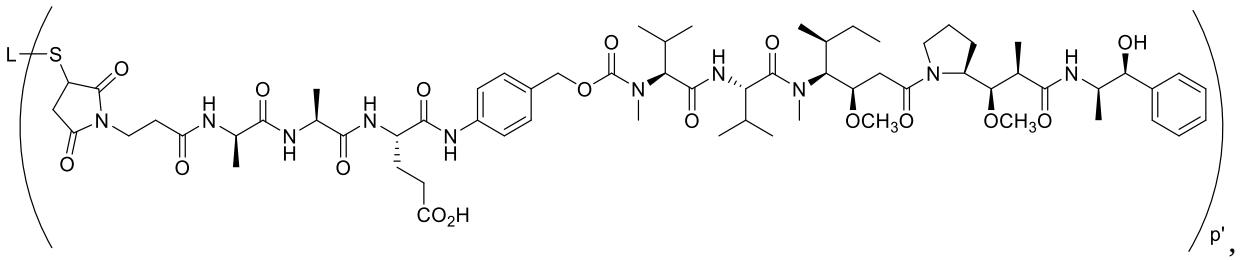
the wavy line indicates the site of covalent binding to a sulfur atom of the Ligand Unit.

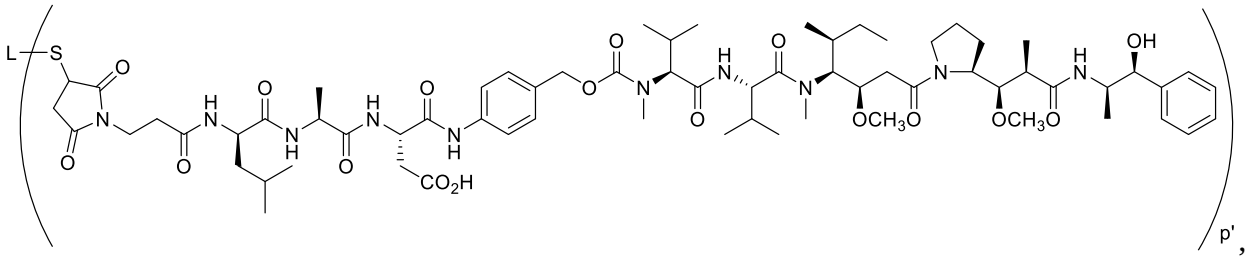
[0031] In some examples, which may be combined with any of the preceding examples, provided herein is the Ligand Drug Conjugate composition wherein the Peptide Cleavable Unit is a tripeptide having the sequence -P3-P2-P1-, wherein P1, P2, and P3 are each an amino acid, wherein: the P3 amino acid of the tripeptide is in the D-amino acid configuration; one of the P2 and P1 amino acids has an aliphatic side chain with hydrophobicity lower than that of leucine; and the other of the P2 and P1 amino acids is negatively charged. In some examples, the P3 amino acid is D-Leu or D-Ala. In some

examples, one of the P2 or P1 amino acid has an aliphatic side chain with hydrophobicity no greater than that of valine, and the other of the P2 or P1 amino acid is negatively charged at plasma physiological pH. In some examples, P2 amino acid has an aliphatic side chain with hydrophobicity no greater than that of valine, and the P1 amino acid is negatively charged at plasma physiological pH. In some examples, -P2-P1- is -Ala-Glu- or -Ala-Asp-. In some examples, -P3-P2-P1- is -D-Leu-Ala-Asp-, -D-Leu-Ala-Glu-, -D-Ala-Ala-Asp-, or -D-Ala-Ala-Glu-. In some examples, the P3 amino acid is D-Leu or D-Ala, the P2 amino acid is Ala, Glu, or Asp, and the P1 amino acid is Ala, Glu, or Asp.

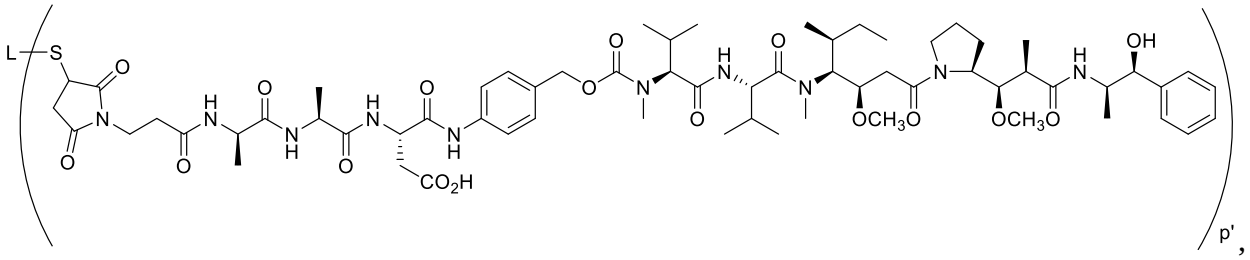
[0032] In some examples, provided herein is the Ligand Drug Conjugate composition wherein the compound has the structure of:







or



or a pharmaceutically acceptable salt thereof,

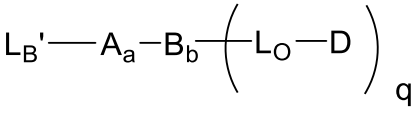
wherein L is a Ligand Unit, and subscript p' is an integer from 1 to 24.

[0033] In some examples, which may be combined with any of the preceding examples, provided herein is the Ligand Drug Conjugate composition wherein L is an antibody Ligand Unit of an intact antibody or an antigen-binding fragment thereof. In some examples, the intact antibody or fragment thereof is capable of selectively binding to a cancer cell antigen. In some examples, the intact antibody is a chimeric, humanized or human antibody, wherein the antibody is capable of selectively binding to a cancer cell antigen or the antibody is a non-binding control antibody thereby defining a non-binding control Conjugate composition.

[0034] In some examples, which may be combined with any of the preceding examples, provided herein is the Ligand Drug Conjugate composition wherein subscript p ranges from about 2 to about 12, or from about 2 to about 10, or from about 2 to about 8, in particular subscript p is about 2, about 4 or about 8.

[0035] In some examples, which may be combined with any of the preceding examples, provided herein are pharmaceutically acceptable formulations, wherein the formulation comprises an effective amount of a Ligand Drug Conjugate composition or an equivalent amount of a non-binding control Conjugate described herein and at least one pharmaceutically acceptable excipient. In some examples, the least one pharmaceutically acceptable excipient is a liquid carrier that provides a liquid formulation, wherein the liquid formulation is suitable for lyophilization or administration to a subject in need thereof. In some examples, the formulation is a solid from lyophilization or a liquid formulation described herein, wherein the at least one excipient of the solid formulation is a lyoprotectant.

[0036] In some examples, provided herein is a Drug Linker compound of Formula **IA:**



(**IA**)

or a salt thereof, wherein

D is a Drug Unit;

L_B' is a ligand covalent binding precursor moiety;

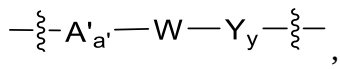
A is a first optional Stretcher Unit;

subscript a is 0 or 1, indicating the absence or presence of A, respectively;

B is an optional Branching Unit;

subscript b is 0 or 1, indicating the absence or presence of B, respectively;

L_O is a secondary linker moiety, wherein the secondary linker has the formula of;



wherein the wavy line adjacent to Y indicates the site of covalent attachment of L_O to the Drug Unit and the wavy line adjacent to A' indicates the site of covalent attachment to the remainder of the Drug Linker compound;

A' is a second optional Stretcher Unit, which in the absence of B becomes a subunit of A;

subscript a′ is 0 or 1, indicating the absence or presence of A', respectively,

W is a Peptide Cleavable Unit, wherein the Peptide Cleavable Unit comprises a tripeptide having the sequence -P3-P2-P1-, wherein P1, P2, and P3 are each an amino acid, wherein:

a first one of the amino acids P1, P2, or P3 is negatively charged or is serine;

a second one of the amino acids P1, P2, or P3 has an aliphatic side chain with hydrophobicity no greater than that of leucine, or is glycine or serine or proline; and

a third one of the amino acids P1, P2, or P3 has hydrophobicity lower than that of leucine, or is proline,

wherein the first one of the amino acids P1, P2, or P3 corresponds to any one of P1, P2, or P3, the second one of the amino acids P1, P2, or P3 corresponds to one of the two remaining amino acids P1, P2, or P3, and the third one of the amino acids P1, P2, or P3 corresponds to the last remaining amino acids P1, P2, or P3,

provided that -P3-P2-P1- is not -Glu-Val-Cit- or -Asp-Val-Cit-;

Y is a self-immolative Spacer Unit;

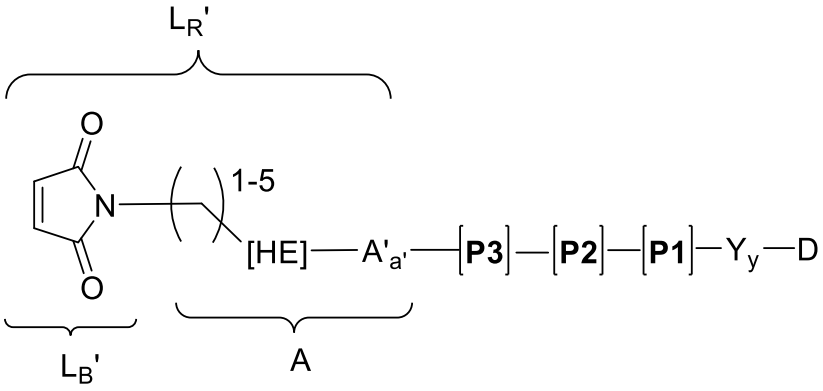
subscript y is 0, 1 or 2 indicating the absence or presence of 1 or 2 of Y, respectively; and

subscript q is an integer ranging from 1 to 4,

provided that subscript q is 1 when subscript b is 0 and subscript q is 2, 3 or 4 when subscript b is 1.

[0037] In some examples, a first one of the amino acids P1, P2, or P3 is negatively charged; a second one of the amino acids P1, P2, or P3 has an aliphatic side chain with hydrophobicity no greater than that of leucine; and a third one of the amino acids P1, P2, or P3 has hydrophobicity lower than that of leucine.

[0038] In some examples, provided herein is the Drug Linker compound of Formula **IA,** wherein the Drug Linker compound has the structure of Formula IH:



(Formula IH)

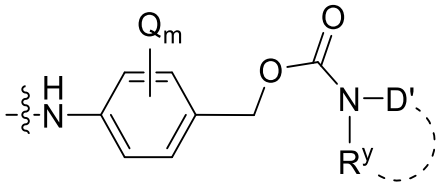
or salt thereof, wherein:

HE is a Hydrolysis Enhancing Unit; and

A' is a subunit, when present, of the indicated first Stretcher Unit (A); subscript a' is 0 or 1, indicating the absence or presence of A'.

[0039] In some examples, which may be combined with any of the preceding examples, provided herein is the Drug Linker compound wherein HE is –(C=O).

[0040] In some examples, which may be combined with any of the preceding examples, provided herein is the Drug Linker compound wherein -Y_y-D has the structure of:



wherein -N(R^y)D' represents D, wherein D' is the remainder of D;

the wavy line indicates the site of covalent attachment to P1;

the dotted line indicates optional cyclization of R^y to D';

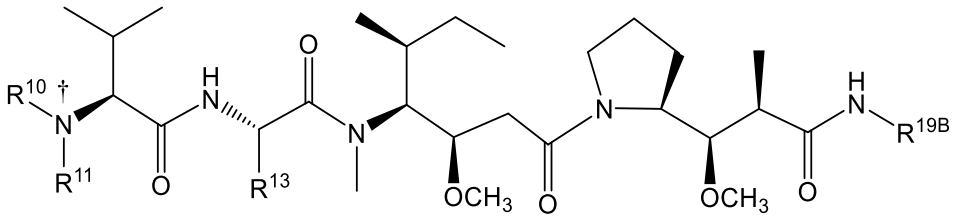
R^y is optionally substituted C_1-C_6 alkyl in absence of cyclization to D' or optionally substituted C_1-C_6 alkylene when cyclized to D';

each Q is independently selected from the group consisting of -C_1-C_8 alkyl, -O-(C_1-C_8 alkyl), halogen, nitro and cyano; and

subscript m is 0, 1 or 2.

[0041] In some examples, which may be combined with any of the preceding examples, provided herein is the Drug Linker compound wherein D is a cytotoxic drug wherein the cytotoxic drug is a secondary amine-containing auristatin compound wherein the nitrogen atom of the secondary amine is the site of covalent attachment to the drug linker

moiety and the secondary amine-containing auristatin compound has the structure of Formula **$D_{F/E-3}$**:



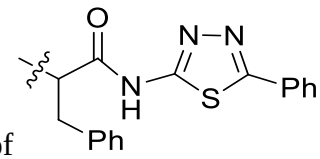
$D_{F/E-3}$

wherein the dagger indicates the site of covalent attachment of the nitrogen atom that provides the carbamate functional group;

one of R^{10} and R^{11} is hydrogen and the other is methyl;

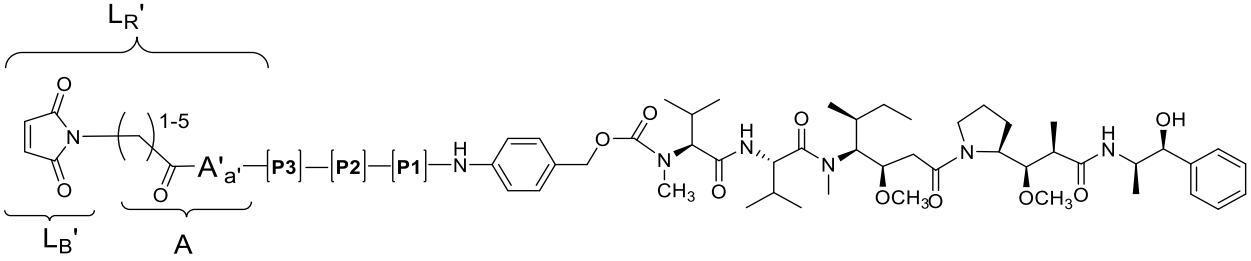
R^{13} is isopropyl or $–CH_2\text{-}CH(CH_3)_2$; and

R^{19B} is $–CH(CH_3)\text{-}CH(OH)\text{-}Ph$, $–CH(CO_2H)\text{-}CH(OH)\text{-}CH_3$, $–CH(CO_2H)\text{-}CH_2Ph$, $\text{-}CH(CH_2Ph)\text{-}2\text{-thiazolyl}$, $\text{-}CH(CH_2Ph)\text{-}2\text{-pyridyl}$, $\text{-}CH(CH_2\text{-}p\text{-}Cl\text{-}Ph)$, $\text{-}CH(CO_2Me)\text{-}CH_2Ph$, $\text{-}CH(CO_2Me)\text{-}CH_2CH_2SCH_3$, $\text{-}CH(CH_2CH_2SCH_3)C(=O)NH\text{-quinol-3-yl}$, $\text{-}CH(CH_2Ph)C(=O)NH\text{-p-Cl-Ph}$, or

R^{19B} has the structure of  , wherein the wavy line indicates covalent attachment to the remainder of the auristatin compound.

[0042] In some examples, which may be combined with any of the preceding examples, provided herein is the Drug Linker compound wherein the secondary amine-containing auristatin compound is monomethylauristatin E (MMAE) or monomethylauristatin F (MMAF).

[0043] In some examples, which may be combined with any of the preceding examples, provided herein is the Drug Linker compound wherein the Drug Linker compound has the structure of Formula IH-MMAE:

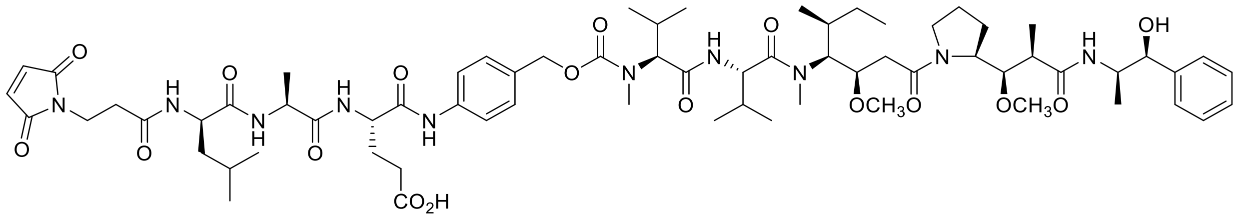


(Formula IH-MMAE)

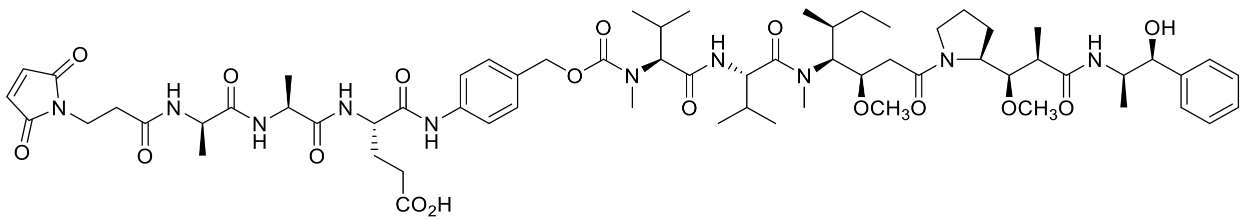
or a salt thereof, wherein
subscript a' is 0, and A' is absent.

[0044] In some examples, which may be combined with any of the preceding examples, provided herein is the Drug Linker compound wherein the Peptide Cleavable Unit is a tripeptide having the sequence -P3-P2-P1-, wherein P1, P2, and P3 are each an amino acid, wherein: the P3 amino acid of the tripeptide is in the D-amino acid configuration; one of the P2 and P1 amino acids has an aliphatic side chain with hydrophobicity lower than that of leucine; and the other of the P2 and P1 amino acids is negatively charged. In some examples, the P3 amino acid is D-Leu or D-Ala. Ins ome examples, one of the P2 or P1 amino acid has an aliphatic side chain with hydrophobicity no greater than that of valine, and the other of the P2 or P1 amino acid is negatively charged at plasma physiological pH. In some examples, P2 amino acid has an aliphatic side chain with hydrophobicity no greater than that of valine, and the P1 amino acid is negatively charged at plasma physiological pH. In some examples, -P2-P1- is -Ala-Glu- or -Ala-Asp-. In some examples, -P3-P2-P1- is -D-Leu-Ala-Asp-, -D-Leu-Ala-Glu-, -D-Ala-Ala-Asp-, or -D-Ala-Ala-Glu-. In some examples, the P3 amino acid is D-Leu or D-Ala, the P2 amino acid is Ala, Glu, or Asp, and the P1 amino acid is Ala, Glu, or Asp.

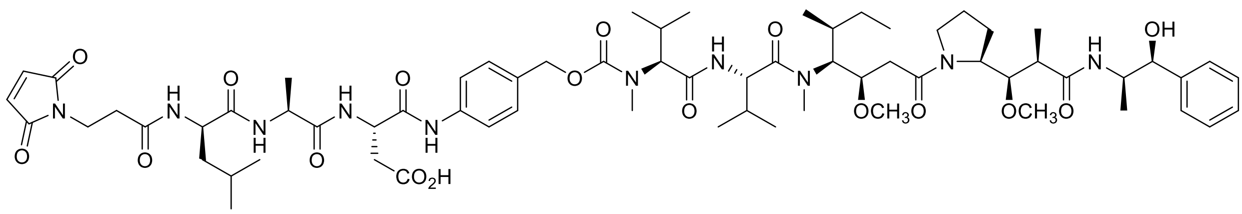
[0045] In some examples, provided herein is the Drug Linker compound wherein the Drug Linker compound has the structure of:



,

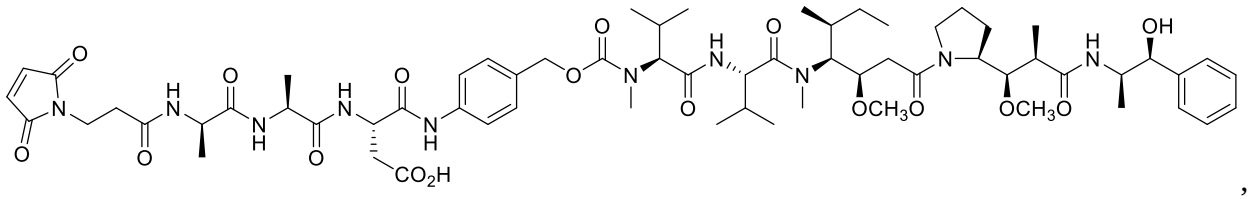


,



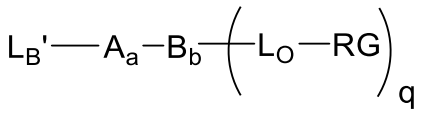
,

or



or a salt thereof.

[0046] In some examples, provided herein is a Linker compound of Formula **IA-L**:



(IA-L)

or a salt thereof, wherein

RG is a reactive group;

L_B' is a ligand covalent binding precursor moiety;

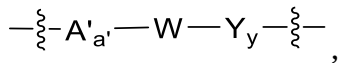
A is a first optional Stretcher Unit;

subscript a is 0 or 1, indicating the absence or presence of A, respectively;

B is an optional Branching Unit;

subscript b is 0 or 1, indicating the absence or presence of B, respectively;

L_O is a secondary linker moiety, wherein the secondary linker has the formula of;



wherein the wavy line adjacent to Y indicates the site of covalent attachment of L_O to the Drug Unit and the wavy line adjacent to A' indicates the site of covalent attachment to the remainder of the Drug Linker compound;

A' is a second optional Stretcher Unit, which in the absence of B becomes a subunit of A;

subscript a′ is 0 or 1, indicating the absence or presence of A', respectively,

W is a Peptide Cleavable Unit, wherein the Peptide Cleavable Unit comprises a tripeptide having the sequence -P3-P2-P1-, wherein P1, P2, and P3 are each an amino acid, wherein:

a first one of the amino acids P1, P2, or P3 is negatively charged or is serine;

a second one of the amino acids P1, P2, or P3 has an aliphatic side chain with hydrophobicity no greater than that of leucine, or is glycine or serine or proline; and

a third one of the amino acids P1, P2, or P3 has hydrophobicity lower than that of leucine, or is proline,

wherein the first one of the amino acids P1, P2, or P3 corresponds to any one of P1, P2, or P3, the second one of the amino acids P1, P2, or P3 corresponds to one of the two

remaining amino acids P1, P2, or P3, and the third one of the amino acids P1, P2, or P3 corresponds to the last remaining amino acids P1, P2, or P3,

provided that -P3-P2-P1- is not -Glu-Val-Cit- or -Asp-Val-Cit-;

Y is a self-immolative Spacer Unit;

subscript y is 0, 1 or 2 indicating the absence or presence of 1 or 2 of Y, respectively; and

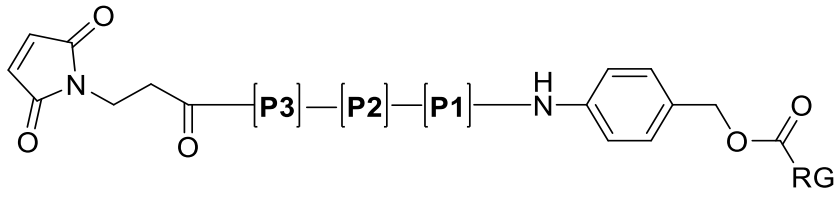
subscript q is an integer ranging from 1 to 4,

provided that subscript q is 1 when subscript b is 0 and subscript q is 2, 3 or 4 when subscript b is 1.

[0047] In some examples, a first one of the amino acids P1, P2, or P3 is negatively charged; a second one of the amino acids P1, P2, or P3 has an aliphatic side chain with hydrophobicity no greater than that of leucine; and a third one of the amino acids P1, P2, or P3 has hydrophobicity lower than that of leucine.

[0048] In some examples, provided herein is the Linker compound, wherein the Peptide Cleavable Unit is a tripeptide having the sequence -P3-P2-P1-, wherein P1, P2, and P3 are each an amino acid, wherein: the P3 amino acid of the tripeptide is in the D-amino acid configuration; one of the P2 and P1 amino acids has an aliphatic side chain with hydrophobicity lower than that of leucine; and the other of the P2 and P1 amino acids is negatively charged.

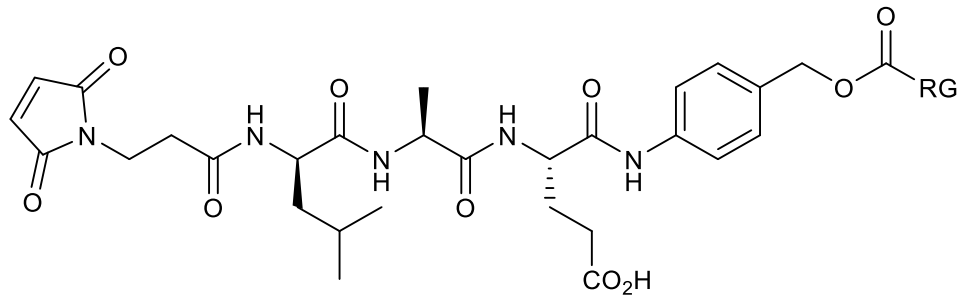
[0049] In some examples, provide herein is the Linker compound wherein the Linker compound has the structure of Formula **IA-L-3**:



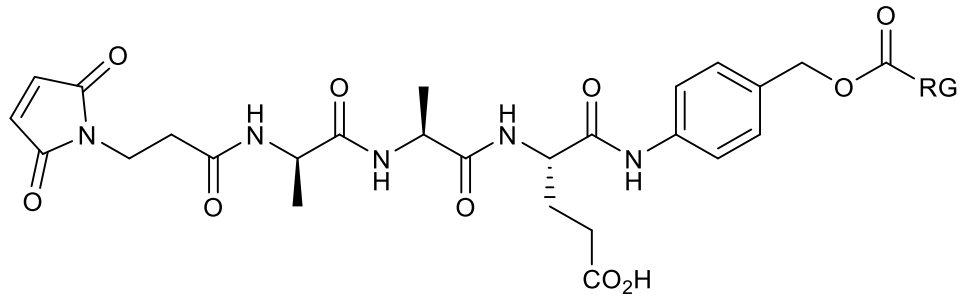
(**IA-L-3**),

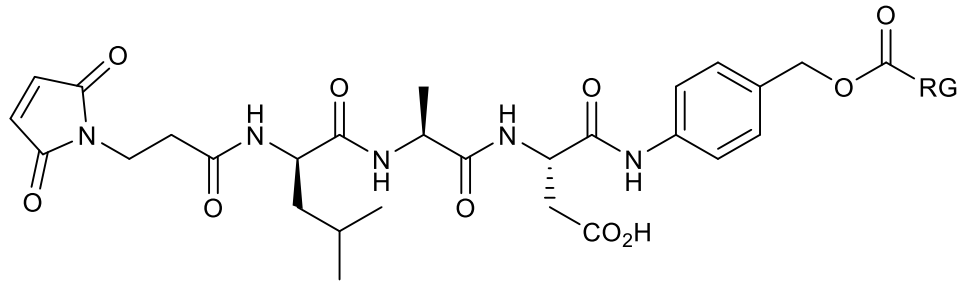
or a salt thereof.

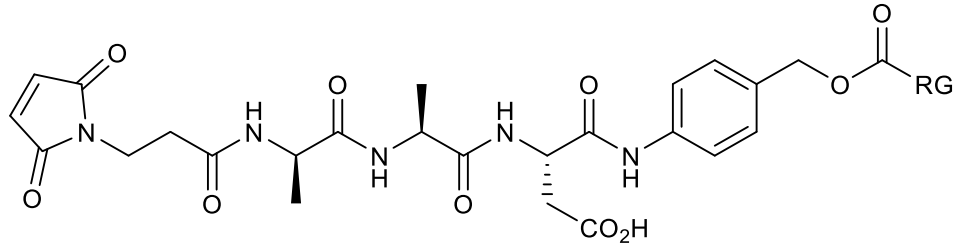
[0050] In some examples, provided herein is a Linker comound wherein the Linker compound has the structure of:



,


,


, or

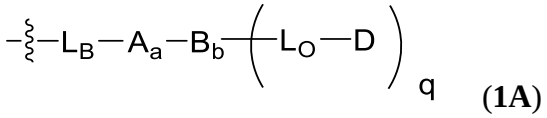

,

or a salt thereof.

[0051] In another example, provided herein is a Ligand Drug Conjugate composition represented by Formula **1**:

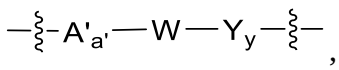
$$L\text{-}[LU\text{-}D']_p \qquad (\mathbf{1})$$

or a pharmaceutically acceptable salt thereof, wherein L is a Ligand Unit; LU is a Linker Unit; D' represents from 1 to 4 Drug Units (D) in each drug linker moiety of formula -LU-D'; and subscript p is a number from 1 to 12, from 1 to 10 or from 1 to 8 or is about 4 or about 8, wherein the Ligand Unit is from an antibody or an antigen-binding fragment of an antibody, wherein the antibody or the antigen-binding fragment is capable of selective binding to an antigen of tumor tissue for subsequent release of the Drug Unit(s) as a free drug, wherein the drug linker moiety of formula -LU-D' in each of the Ligand Drug Conjugate compounds of the composition has the structure of Formula **1A**:


(**1A**)

or a salt thereof, wherein the wavy line indicates covalent attachment to L; D is the Drug Unit; L_B is a ligand covalent binding moiety; A is a first optional Stretcher Unit; subscript a is 0 or 1, indicating the absence or presence of A, respectively; B is an optional Branching Unit;

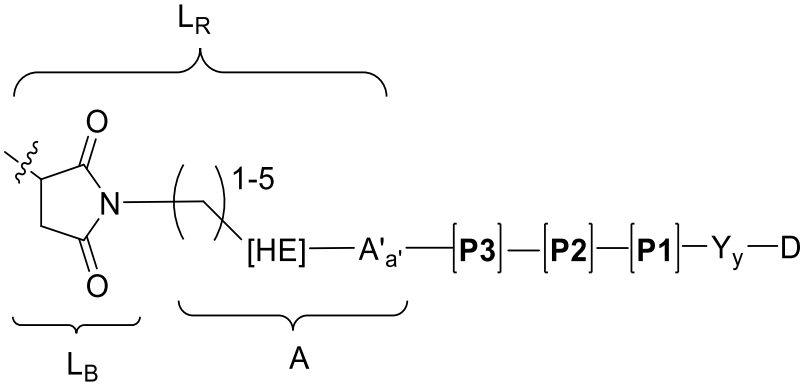
subscript b is 0 or 1, indicating the absence or presence of B, respectively; L_O is a secondary linker moiety, wherein the secondary linker has the formula of;



wherein the wavy line adjacent to Y indicates the site of covalent attachment of L_O to the Drug Unit and the wavy line adjacent to A' indicates the site of covalent attachment of L_O to the remainder of the drug linker moiety; A' is a second optional Stretcher Unit, which when present and in the absence of B becomes a subunit of A, subscript a' is 0 or 1, indicating the absence or presence of A', respectively, W is a Peptide Cleavable Unit, wherein the Peptide Cleavable Unit comprises a tripeptide having the sequence -P3-P2-P1-, wherein P1, P2, and P3 are each an amino acid, wherein: a first one of the amino acids P1, P2, or P3 is negatively charged or is serine; a second one of the amino acids P1, P2, or P3 has an aliphatic side chain with hydrophobicity no greater than that of leucine, or is glycine or serine or proline; and a third one of the amino acids P1, P2, or P3 has hydrophobicity lower than that of leucine, or is proline, wherein the first one of the amino acids P1, P2, or P3 corresponds to any one of P1, P2, or P3, the second one of the amino acids P1, P2, or P3 corresponds to one of the two remaining amino acids P1, P2, or P3, and the third one of the amino acids P1, P2, or P3 corresponds to the last remaining amino acids P1, P2, or P3, provided that -P3-P2-P1- is not -Glu-Val-Cit- or -Asp-Val-Cit-; each Y when present is a self-immolative Spacer Unit; subscript y is 0, 1 or 2 indicating the absence or presence of 1 or 2 of Y, respectively; and subscript q is an integer ranging from 1 to 3 or 1 to 4, and provided that subscript q is 1 when subscript b is 0 and subscript q is 2, 3, or 4 when subscript b is 1; and wherein the Ligand Drug Conjugate compounds of the composition have the structure of Formula **1** in which subscript p is replaced by subscript p', wherein subscript p' is an integer from 1 to 12, 1 to 10 or 1 to 8 or is 4 or 8. In some examples, a first one of the amino acids P1, P2, or P3 is negatively charged; a second one of the amino acids P1, P2, or P3 has an aliphatic side chain with hydrophobicity no greater than that of leucine; and a third one of the amino acids P1, P2, or P3 has hydrophobicity lower than that of leucine. In some examples, W is a Peptide Cleavable Unit, wherein the Peptide Cleavable Unit comprises a tripeptide having the sequence -P3-P2-P1-, wherein wherein one of the amino acids is negatively charged, another of the amino acids has a aliphatic side chain with hydrophobicity no greater than that of leucine and the remaining amino acid has hydrophobicity lower than that of leucine. In some examples protease action upon the Peptide Cleavable Unit is capable of releasing D as the

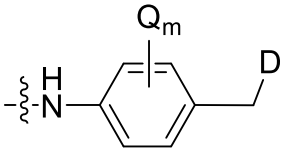
free drug. In some examples, the Ligand Drug Conjugate compounds in the Ligand Drug Conjugate composition are in salt form.

[0052] In some examples, the Ligand Drug Conjugate compounds in the Ligand Drug Conjugate composition predominately have drug linker moieties of Formula 1H:

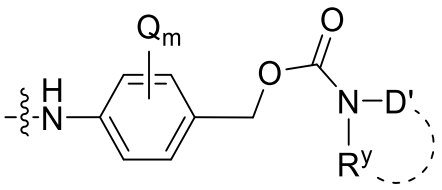


(Formula 1H)

or pharmaceutically acceptable salts thereof, and optionally having a minority of Ligand Drug Conjugate compounds in which one or more of the drug linker moieties in each of such compounds has its succinimide ring in hydrolyzed form and wherein HE is a Hydrolysis Enhancing Unit; A' is a subunit, when present, of the indicated first Stretcher Unit (A); subscript a' is 0 or 1, indicating the absence or presence of A', respectively; and the wavy line indicates the site of covalent attachment to a sulfur atom of the Ligand Unit. In some examples, HE is –C(=O). In some examples, -Y_y-D has the structure of:



wherein each Q, when present, is independently selected from the group consisting of -C_1-C_8 alkyl, -O-(C_1-C_8 alkyl), halogen, nitro and cyano; and subscript m is 0, 1 or 2. In some examples, -Y_y-D has the structure of:



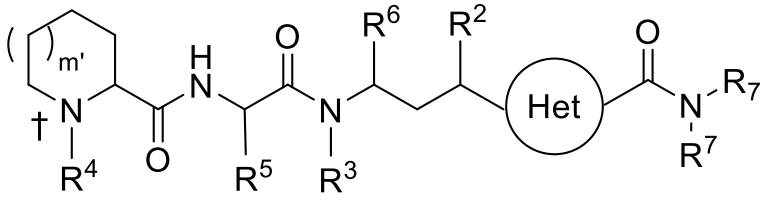
wherein -N(R^y)D' represents D, wherein D' is the remainder of D; the wavy line indicates the site of covalent attachment to P1; the dotted line indicates optional cyclization of R^y to D'; R^y is optionally substituted C_1-C_6 alkyl in absence of cyclization to D' or optionally substituted C_1-C_6 alkylene when cyclized to D'; each Q, when present, is independently

selected from the group consisting of -C_1-C_8 alkyl, -O-(C_1-C_8 alkyl), halogen, nitro and cyano; and subscript m is 0, 1 or 2.

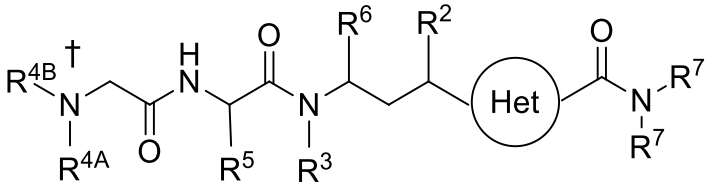
[0053] In some examples, D incorporates the structure of a tubulin disrupting agent, a DNA minor groove binder, a DNA damaging agent, or a DNA replication inhibitor. In some examples, D incorporates the structure of a tubulysin. In some examples, D incorporates the structure of a camptothecin. In some examples, D incorporates the structure of an auristatin. In some examples, D incorporates the structure of an anthracycline. In some examples, D incorporates the structure of a camptothecin selected from the group consisting of:

C_1-C_8 aminoalkyl, C_1-C_8 alkyl-C(O)-, C_1-C_8 hydoxyalkyl-C(O)-, C_1-C_8 aminoalkyl-C(O)-, C_3-C_{10} cycloalkyl, (C_3-C_{10} cycloalkyl)-C_1-C_4 alkyl-, C_3-C_{10} heterocycloalkyl, (C_3-C_{10} heterocycloalkyl)-C_1-C_4 alkyl-, phenyl, phenyl-C_1-C_4 alkyl-, diphenyl-C_1-C_4 alkyl-, heteroaryl, and heteroaryl-C_1-C_4 alkyl-, or R^F and $R^{F'}$ are combined with the nitrogen atom to which each is attached to form a 5-, 6- or 7-membered ring having 0 to 3 substituents selected from the group consisting of halogen, C_1-C_4 alkyl, -OH, -OC_1-C_4 alkyl, -NH_2, -NH-C_1-C_4 alkyl, -N(C_1-C_4 alkyl)$_2$; and wherein the cycloalkyl, heterocycloalkyl, phenyl and heteroaryl portions of R^B, R^C, R^F and $R^{F'}$ are substituted with from 0 to 3 substituents selected from the group consisting of halogen, C_1-C_4 alkyl, -OH, -OC_1-C_4 alkyl, -NH_2, -NHC_1-C_4 alkyl, and -N(C_1-C_4 alkyl)$_2$.

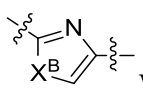
[0054] In some examples, D has a formula selected from the group consisting of



D_G and



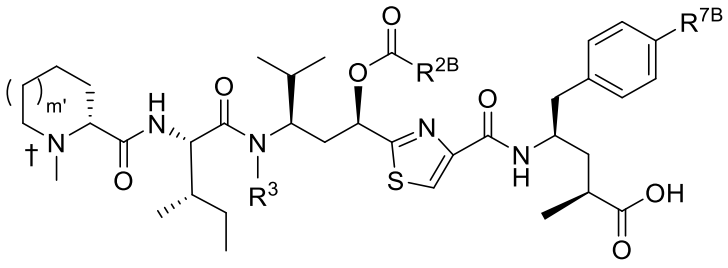
D_H

wherein the dagger represents the point of attachment of D to the secondary linker of the drug linker moiety and the circle represents an 5-membered or 6-membered nitrogen heteroarylene wherein the indicated required substituents to that heteroarylene are in a 1,3- or *meta*-relationship to each other with optional substitution at the remaining positions; R^2 is X^A-R^{2A}, wherein X^A is -O-, -S-, -N(R^{2B})-, -CH_2-, -(C=O)N(R^{2B})- or -O(C=O)N(R^{2B})- wherein R^{2B} is hydrogen or optionally substituted alkyl, R^{2A} is hydrogen, optionally substituted alkyl, optionally substituted aryl, or -C(=O)R^C, wherein R^C is hydrogen, optionally substituted alkyl, or optionally substituted aryl or R^2 is an O-linked substituent; R^3 is hydrogen or optionally substituted alkyl; R^4, R^{4A}, R^{4B}, R^5 and R^6 are optionally substituted alkyl, independently selected, one R^7 is hydrogen or optionally substituted alkyl and the other R^7 is optionally substituted arylalkyl or optionally substituted heteroarylalkyl, and subscript m' is 0 or 1. In some examples, R^4 is methyl or R^{4A} and R^{4B} are methyl. In some examples, the 5-membered heteroarylene is represented by the structure 

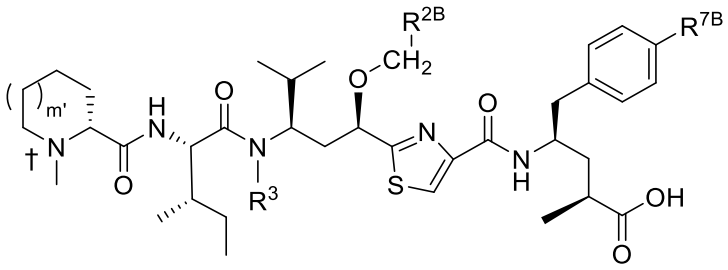
wherein X^B is O, S,

or N-R^B wherein R^B is hydrogen or lower alkyl. In some examples, the 5-membered heteroarylene is a divalent thiazole moiety. In some examples, subscript m' is 1.

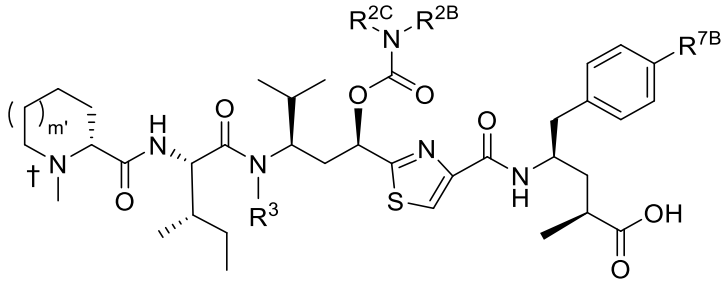
[0055] In some examples, D has a formula selected from the group consisting of



D_{G-3},

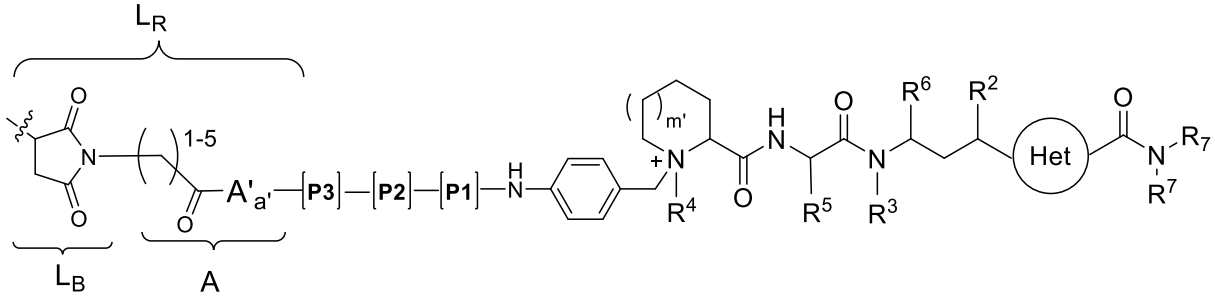


D_{G-4}, and

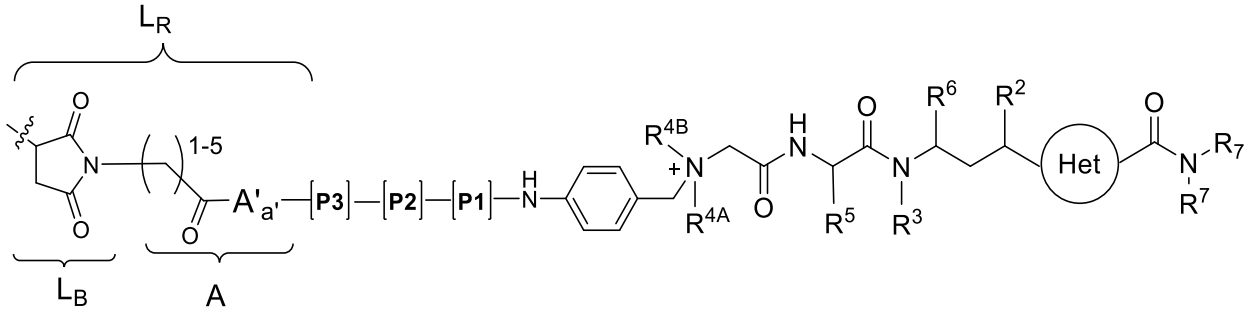


D_{G-5},

wherein R^{7B} is hydrogen or -OH, R^3 is lower alkyl, and R^{2B} and R^{2C} are independently hydrogen or lower alkyl. In some examples, subscript q is 1 and the Ligand Drug Conjugate compounds in the Ligand Drug Conjugate composition predominately have drug linker moieties of:

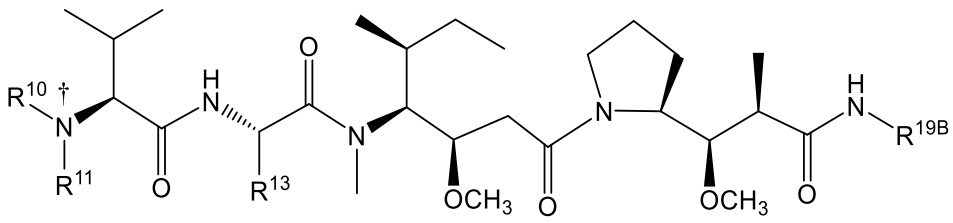


or a pharmaceutical acceptable salt thereof, and optionally having a minority of Ligand Drug Conjugate compounds in which one or more of the drug linker moieties in each of such compounds has the succinimide ring in hydrolyzed form, and wherein: subscript a' is 0, and A' is absent; and the wavy line indicates the site of covalent attachment to a sulfur atom of the Ligand Unit. In some examples, subscript q is 1 and the Ligand Drug Conjugate compounds in the Ligand Drug Conjugate composition predominately have drug linker moieties of:



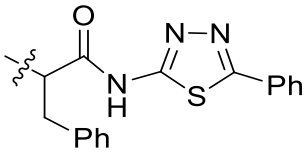
or a pharmaceutical acceptable salt thereof, and optionally having a minority of Ligand Drug Conjugate compounds in which one or more of the drug linker moieties in each of such compounds has the succinimide ring in hydrolyzed form, and wherein: subscript a' is 0, and A' is absent; and the wavy line indicates the site of covalent attachment to a sulfur atom of the Ligand Unit.

[0056] In some examples, D is a cytotoxic drug wherein the cytotoxic drug is a secondary amine-containing auristatin compound wherein the nitrogen atom of the secondary amine is the site of covalent attachment to the drug linker moiety and the secondary amine-containing auristatin compound has the structure of Formula $\mathbf{D_{F/E-3}}$:



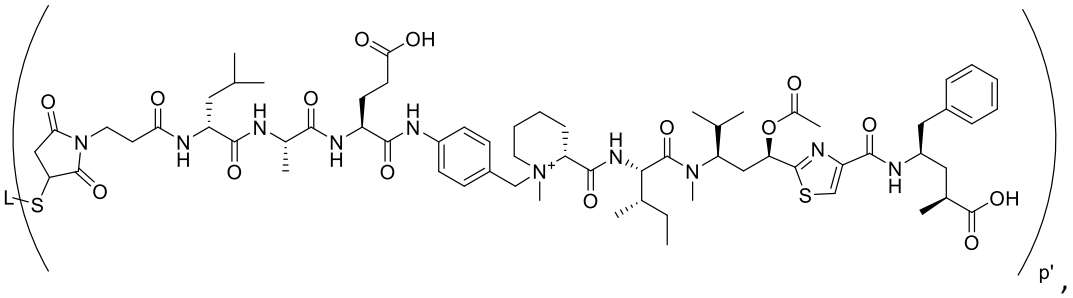
$\mathbf{D_{F/E-3}}$

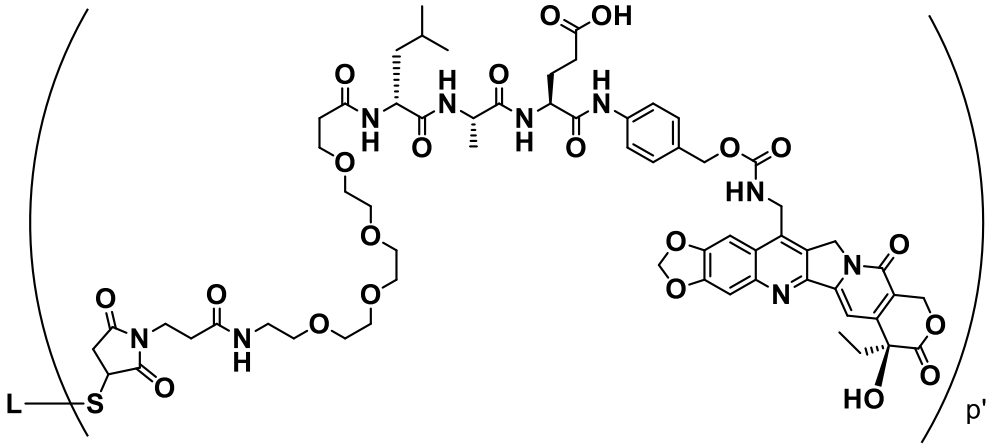
wherein the dagger indicates the site of covalent attachment of the nitrogen atom that provides the carbamate functional group; one of R^{10} and R^{11} is hydrogen and the other is methyl; R^{13} is isopropyl or $–CH_2\text{-}CH(CH_3)_2$; and R^{19B} is $–CH(CH_3)\text{-}CH(OH)\text{-}Ph$, $–CH(CO_2H)\text{-}CH(OH)\text{-}CH_3$, $–CH(CO_2H)\text{-}CH_2Ph$, $\text{-}CH(CH_2Ph)$-2-thiazolyl, $\text{-}CH(CH_2Ph)$-2-pyridyl, $\text{-}CH(CH_2\text{-}p\text{-}Cl\text{-}Ph)$, $\text{-}CH(CO_2Me)\text{-}CH_2Ph$, $\text{-}CH(CO_2Me)\text{-}CH_2CH_2SCH_3$, -

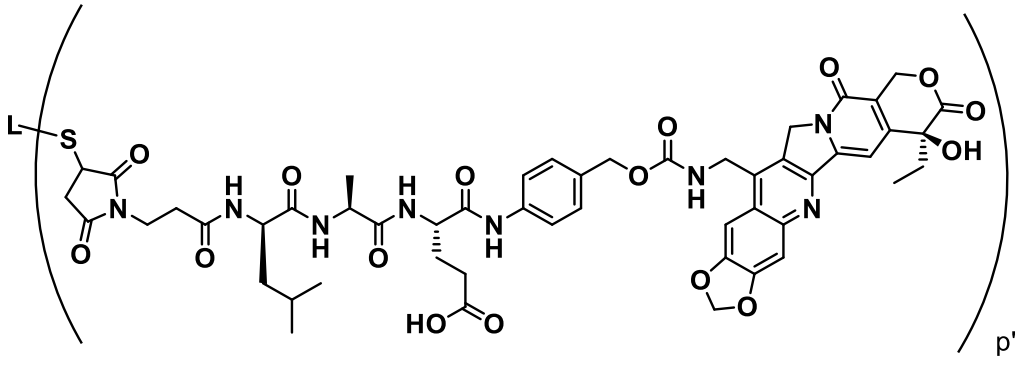
$CH(CH_2CH_2SCH_3)C(=O)NH$-quinol-3-yl, $-CH(CH_2Ph)C(=O)NH$-p-Cl-Ph, or R^{19B} has the structure of  , wherein the wavy line indicates covalent attachment to the remainder of the auristatin compound. In some examples, the secondary amine-containing auristatin compound is monomethylauristatin E (MMAE) or monomethylauristatin F (MMAF).

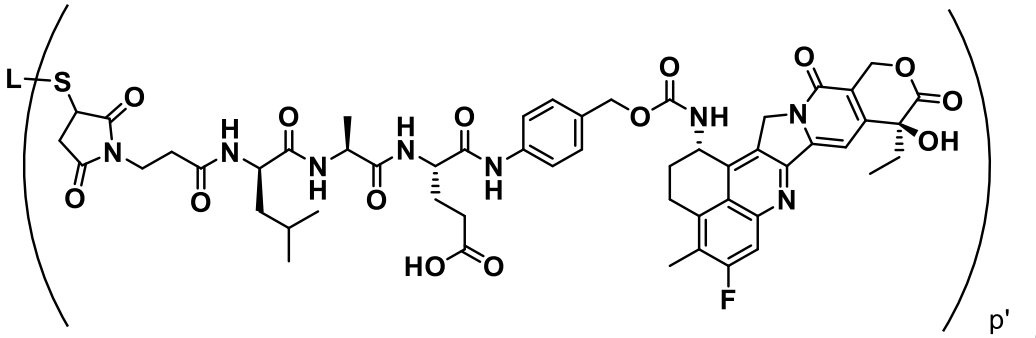
[0057] In some examples, the Peptide Cleavable Unit is a tripeptide having the sequence -P3-P2-P1-, wherein P1, P2, and P3 are each an amino acid, wherein: the P3 amino acid of the tripeptide is in the D-amino acid configuration; one of the P2 and P1 amino acids has an aliphatic side chain with hydrophobicity lower than that of leucine; and the other of the P2 and P1 amino acids is negatively charged. In some examples, the P3 amino acid is D-Leu or D-Ala. In some examples, one of the P2 or P1 amino acid has an aliphatic side chain with hydrophobicity no greater than that of valine, and the other of the P2 or P1 amino acid is negatively charged at plasma physiological pH. In some examples, the P2 amino acid has an aliphatic side chain with hydrophobicity no greater than that of valine, and the P1 amino acid is negatively charged at plasma physiological pH. In some examples, -P2-P1- is -Ala-Glu- or -Ala-Asp-. In some examples, -P3-P2-P1- is -D-Leu-Ala-Asp-, -D-Leu-Ala-Glu-, -D-Ala-Ala-Asp-, or -D-Ala-Ala-Glu-. In some examples, the P3 amino acid is D-Leu or D-Ala, the P2 amino acid is Ala, Glu, or Asp, and the P1 amino acid is Ala, Glu, or Asp.

[0058] In some examples, the composition comprises Ligand Drug Conjugate compounds having the structure of:

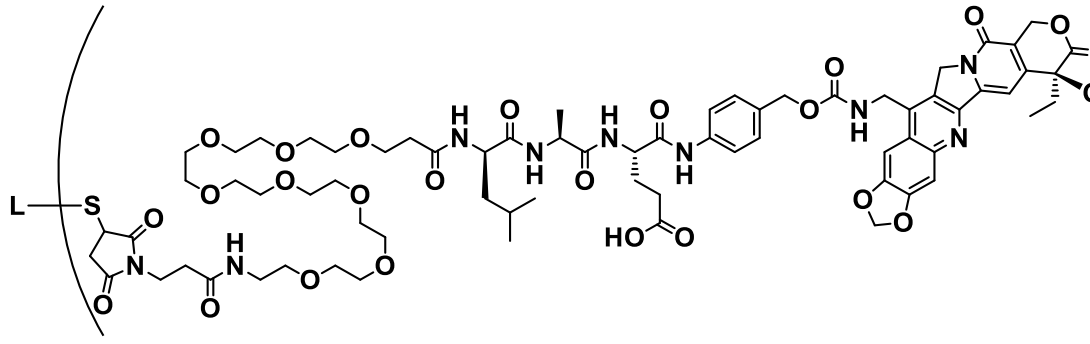








, or



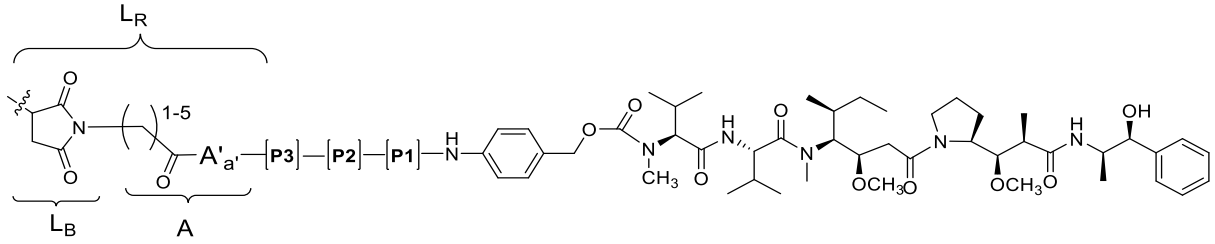
,

or a pharmaceutically acceptable salt thereof, wherein L is the Ligand Unit, and subscript p' is an integer from 1 to 12. In some examples, L is an antibody Ligand Unit of an intact antibody or an antigen-binding fragment thereof. In some examples, the intact antibody is a an intact chimeric, humanized or human antibody. In some examples, the intact

antibody or fragment thereof is capable of selectively binding to a cancer cell antigen. In some examples, the intact antibody or fragment thereof is capable of selectively binding to an immune cell antigen. In some examples, the intact antibody or fragment thereof is capable of selectively binding CD30. In some examples, the intact antibody or fragment thereof comprises CDR-H1, CDR-H2, CDR-H3, CDR-L1, CDR-L2, and CDR-L3 comprising the amino acid sequences of SEQ ID NOs: 1, 2, 3, 4, 5, and 6, respectively. In some examples, the intact antibody or fragment thereof comprises a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 7 and a light chain variable region comprising the amino acid sequence of SEQ ID NO: 8. In some examples, the intact antibody is cAC10. In some examples, the intact antibody or fragment thereof is capable of selectively binding LIV1. In some examples, intact antibody or fragment thereof comprises CDR-H1, CDR-H2, CDR-H3, CDR-L1, CDR-L2, and CDR-L3 comprising the amino acid sequences of SEQ ID NOs: 518, 519, 520, 521, 522, and 523, respectively. In some examples, the intact antibody or fragment thereof comprises a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 524 and a light chain variable region comprising the amino acid sequence of SEQ ID NO: 525. In some examples, the intact antibody is ladiratuzumab. In some examples, the intact antibody or fragment thereof is capable of selectively binding TROP2. In some examples, the intact antibody is sacituzumab or datopotamab. In some examples, the intact antibody or fragment thereof is capable of selectively binding ALPP. In some examples, the intact antibody or fragment thereof is capable of selectively binding IL1RAP. In some examples, the intact antibody or fragment thereof comprises CDR-H1, CDR-H2, CDR-H3, CDR-L1, CDR-L2, and CDR-L3 comprising the amino acid sequences of SEQ ID NOs: 96, 97, 98, 99, 100, and 101, respectively. In some examples, the intact antibody or fragment thereof comprises a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 102 and a light chain variable region comprising the amino acid sequence of SEQ ID NO: 103. In some examples, the intact antibody is nidanilimab. In some examples, the intact antibody or fragment thereof is capable of selectively binding ASCT2. In some examples, the intact antibody or fragment thereof comprises CDR-H1, CDR-H2, CDR-H3, CDR-L1, CDR-L2, and CDR-L3 comprising the amino acid sequences of SEQ ID NOs: 794, 795, 796, 797, 798, and 799, respectively. In some examples, the intact antibody or fragment thereof comprises a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 801 and a light chain variable region comprising the amino acid sequence of SEQ ID NO: 802. In some examples, the

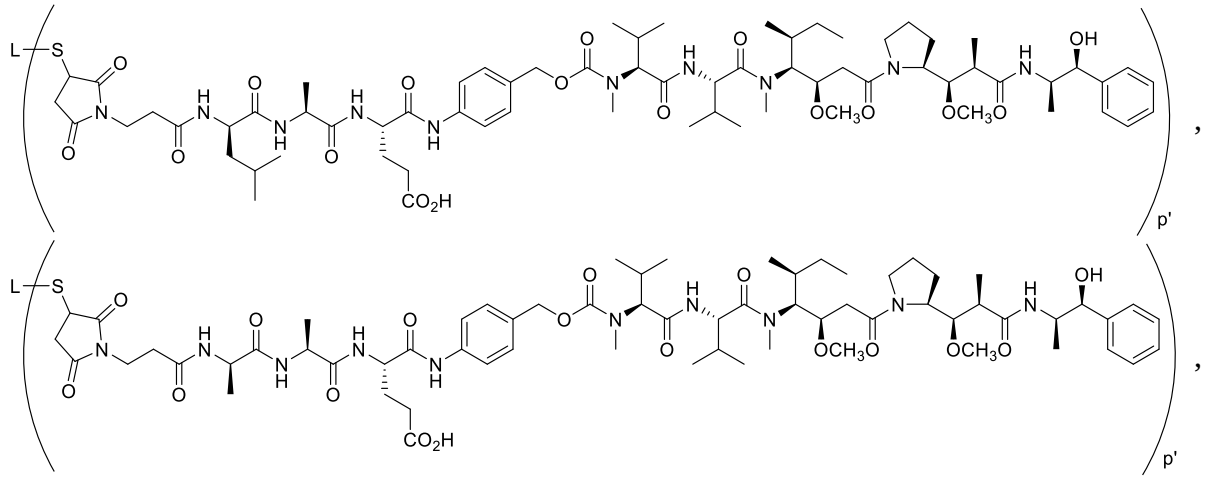
intact antibody or fragment thereof comprises a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 790 and a light chain variable region comprising the amino acid sequence of SEQ ID NO: 791. In some examples, the intact antibody or fragment thereof comprises a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 792 and a light chain variable region comprising the amino acid sequence of SEQ ID NO: 793.

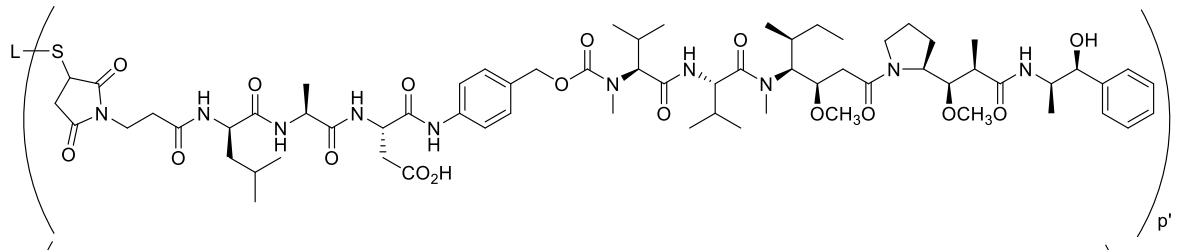
[0059] In some examples, subscript q is 1 and the Ligand Drug Conjugate compounds in the Ligand Drug Conjugate composition predominately have drug linker moieties of Formula 1H-MMAE:

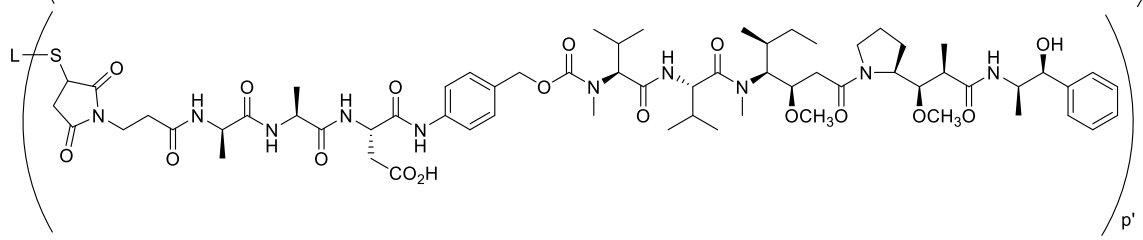


(Formula 1H-MMAE)

or a pharmaceutical acceptable salt thereof, and optionally having a minority of Ligand Drug Conjugate compounds in which one or more of the drug linker moieties in each of such compounds has its the succinimide ring in hydrolyzed form and wherein: subscript a' is 0, and A' is absent; and the wavy line indicates the site of covalent binding to a sulfur atom of the Ligand Unit. In some examples, the composition comprises Ligand Drug Conjugate compounds having the structure of




, or


,

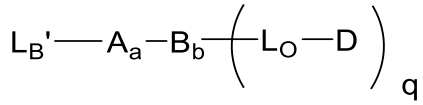
or a pharmaceutically acceptable salt thereof, wherein L is the Ligand Unit, and subscript p' is an integer from 1 to 12.

[0060] In some examples, p ranges from about 2 to about 12, or from about 2 to about 10, or from about 2 to about 8, or subscript p is about 2, about 4 or about 8.

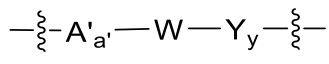
[0061] In another example, provided herein is a pharmaceutically acceptable formulation, wherein the formulation comprises an effective amount of a Ligand Drug Conjugate composition described herein and at least one pharmaceutically acceptable excipient. In some examples, the least one pharmaceutically acceptable excipient is a liquid carrier that provides a liquid formulation, wherein the liquid formulation is suitable for lyophilization or administration to a subject in need thereof. In some examples, the formulation is a lyophilized solid or a liquid formulation, wherein the at least one excipient of the solid formulation is a lyoprotectant.

[0062] In another example, provided is a method of treating cancer comprising administering to a subject in need thereof a therapeutically effective amount of a Ligand Drug Conjugate composition described herein or a pharmaceutically acceptable formulation of any Ligand Drug Conjugate composition described herein.

[0063] In another example, provided herein is a Drug Linker compound of Formula **IA**:

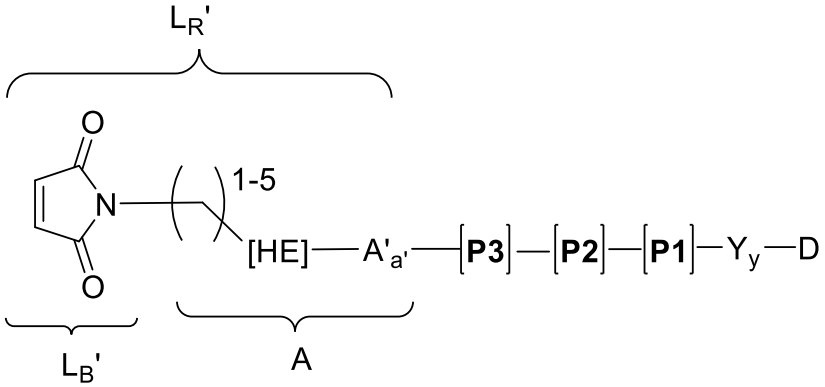

(**IA**)

or a salt thereof, wherein D is a Drug Unit; L_B' is a ligand covalent binding precursor moiety; A is a first optional Stretcher Unit; subscript a is 0 or 1, indicating the absence or presence of A, respectively; B is an optional Branching Unit; subscript b is 0 or 1, indicating the absence or presence of B, respectively; L_O is a secondary linker moiety, wherein the secondary linker has the formula of;



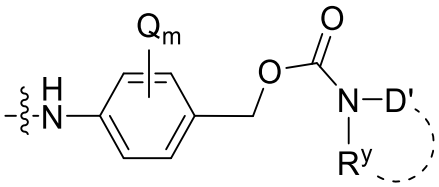
wherein the wavy line adjacent to Y indicates the site of covalent attachment of L_O to the Drug Unit and the wavy line adjacent to A' indicates the site of covalent attachment of L_O to the remainder of the Drug Linker compound; A' is a second optional Stretcher Unit, which when present and in the absence of B becomes a subunit of A; subscript a' is 0 or 1, indicating the absence or presence of A', respectively, W is a Peptide Cleavable Unit, wherein the Peptide Cleavable Unit comprises a tripeptide having the sequence -P3-P2-P1-, wherein P1, P2, and P3 are each an amino acid, wherein: a first one of the amino acids P1, P2, or P3 is negatively charged or is serine; a second one of the amino acids P1, P2, or P3 has an aliphatic side chain with hydrophobicity no greater than that of leucine, or is glycine or serine or proline; and a third one of the amino acids P1, P2, or P3 has hydrophobicity lower than that of leucine, or is proline, wherein the first one of the amino acids P1, P2, or P3 corresponds to any one of P1, P2, or P3, the second one of the amino acids P1, P2, or P3 corresponds to one of the two remaining amino acids P1, P2, or P3, and the third one of the amino acids P1, P2, or P3 corresponds to the last remaining amino acids P1, P2, or P3, provided that -P3-P2-P1- is not -Glu-Val-Cit- or -Asp-Val-Cit-; each Y when present is a self-immolative Spacer Unit; subscript y is 0, 1 or 2 indicating the absence or presence of 1 or 2 of Y, respectively; and subscript q is an integer ranging from 1 to 3, and provided that subscript q is 1 when subscript b is 0 and subscript q is 2 or 3 when subscript b is 1. In some examples, a first one of the amino acids P1, P2, or P3 is negatively charged; a second one of the amino acids P1, P2, or P3 has an aliphatic side chain with hydrophobicity no greater than that of leucine; and a third one of the amino acids P1, P2, or P3 has hydrophobicity lower than that of leucine. In some examples, the Drug Linker compound is in a salt form.

[0064] In some examples, the Drug Linker compound has the structure of Formula IH:



(Formula IH)

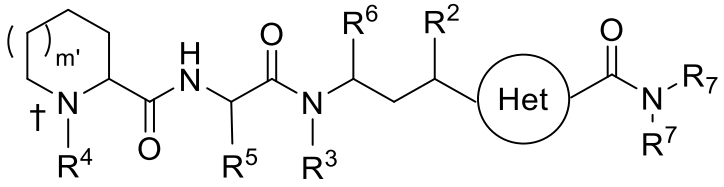
or salt thereof, wherein: HE is a Hydrolysis Enhancing Unit; and A' is a subunit, when present, of the indicated first Stretcher Unit (A); subscript a' is 0 or 1, indicating the absence or presence of A', respectively. In some examples, HE is –C(=O). In some examples, -Y_y-D has the structure of:



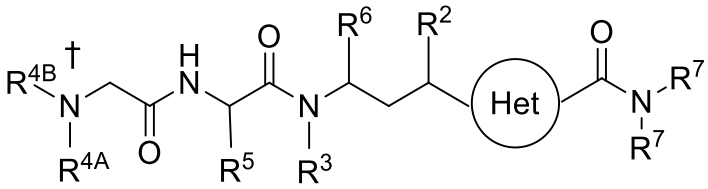
wherein -N(R^y)D' represents D, wherein D' is the remainder of D; the wavy line indicates the site of covalent attachment to P1; the dotted line indicates optional cyclization of R^y to D'; R^y is optionally substituted C_1-C_6 alkyl in absence of cyclization to D' or optionally substituted C_1-C_6 alkylene when cyclized to D'; each Q is independently selected from the group consisting of -C_1-C_8 alkyl, -O-(C_1-C_8 alkyl), halogen, nitro and cyano; and subscript m is 0, 1 or 2.

[0065] In some examples, D incorporates the structure of a tubulin disrupting agent, a DNA minor groove binder, a DNA damaging agent, or a DNA replication inhibitor. In some examples, D incorporates the structure of a tubulysin. In some examples, D incorporates the structure of a camptothecin. In some examples, D incorporates the structure of an auristatin. In some examples, D incorporates the structure of an anthracycline. In some examples, D incorporates the structure of a camptothecin having the structure selected from the group consisting of

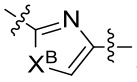
C_1-C_8 aminoalkyl, C_1-C_8 alkyl-C(O)-, C_1-C_8 hydoxyalkyl-C(O)-, C_1-C_8 aminoalkyl-C(O)-, C_3-C_{10} cycloalkyl, (C_3-C_{10} cycloalkyl)-C_1-C_4 alkyl-, C_3-C_{10} heterocycloalkyl, (C_3-C_{10} heterocycloalkyl)-C_1-C_4 alkyl-, phenyl, phenyl-C_1-C_4 alkyl-, diphenyl-C_1-C_4 alkyl-, heteroaryl, and heteroaryl-C_1-C_4 alkyl-, or R^F and $R^{F'}$ are combined with the nitrogen atom to which each is attached to form a 5-, 6- or 7-membered ring having 0 to 3 substituents selected from the group consisting of halogen, C_1-C_4 alkyl, -OH, -OC_1-C_4 alkyl, -NH_2, -NH-C_1-C_4 alkyl, -N(C_1-C_4 alkyl)$_2$; and wherein the cycloalkyl, heterocycloalkyl, phenyl and heteroaryl portions of R^B, R^C, R^F and $R^{F'}$ are substituted with from 0 to 3 substituents selected from the group consisting of halogen, C_1-C_4 alkyl, -OH, -OC_1-C_4 alkyl, -NH_2, -NHC_1-C_4 alkyl, and -N(C_1-C_4 alkyl)$_2$. In some examples, D has a formula selected from the group consisting of



D_G and



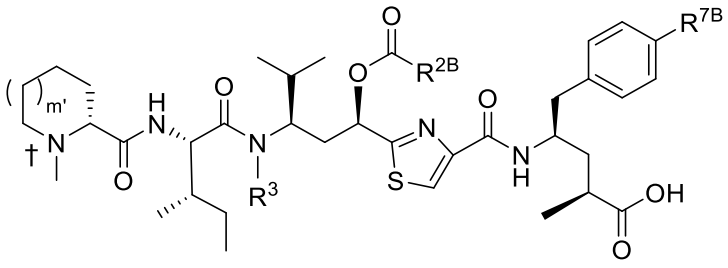
D_H

wherein the dagger represents the point of attachment of D to the remainder of the Drug Linker compound and the circle represents an 5-membered or 6-membered nitrogen heteroarylene wherein the indicated required substituents to that heteroarylene are in a 1,3- or *meta*-relationship to each other with optional substitution at the remaining positions; R^2 is X^A-R^{2A}, wherein X^A is -O-, -S-, -N(R^{2B})-, -CH_2-, -(C=O)N(R^{2B})- or -O(C=O)N(R^{2B})- wherein R^{2B} is hydrogen or optionally substituted alkyl, R^{2A} is hydrogen, optionally substituted alkyl, optionally substituted aryl, or -C(=O)R^C, wherein R^C is hydrogen, optionally substituted alkyl, or optionally substituted aryl or R^2 is an O-linked substituent; R^3 is hydrogen or optionally substituted alkyl; R^4, R^{4A}, R^{4B}, R^5 and R^6 are optionally substituted alkyl, independently selected, one R^7 is hydrogen or optionally substituted alkyl and the other R^7 is optionally substituted arylalkyl or optionally substituted heteroarylalkyl, and subscript m' is 0 or 1. In some examples, R^4 is methyl or R^{4A} and R^{4B} are methyl. In some examples, the 5-membered heteroarylene is represented by the structure 

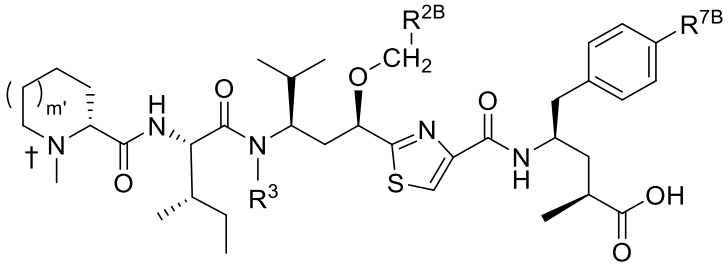
wherein X^B is O, S, or N-R^B wherein R^B is hydrogen or lower alkyl. In some examples,

the 5-membered heteroarylene is a divalent thiazole moiety. In some examples, subscript m' is 1.

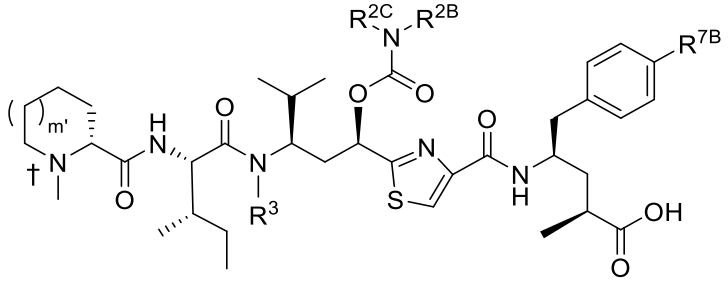
[0066] In some examples, D has a formula selected from the group consisting of



D_{G-3},

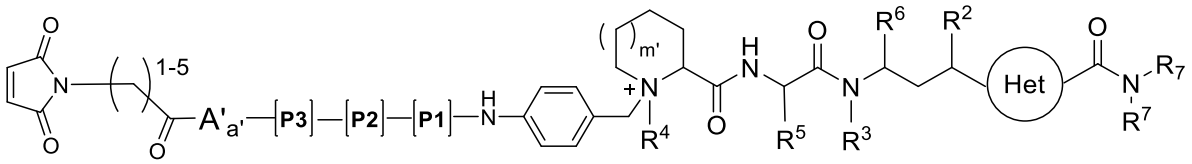


D_{G-4}, and

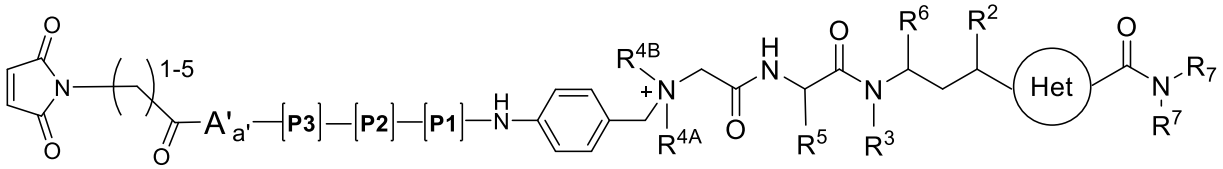


D_{G-5},

wherein R^{7B} is hydrogen or -OH, R^3 is lower alkyl, and R^{2B} and R^{2C} are independently hydrogen or lower alkyl. In some examples, the Drug Linker compound has the structure:

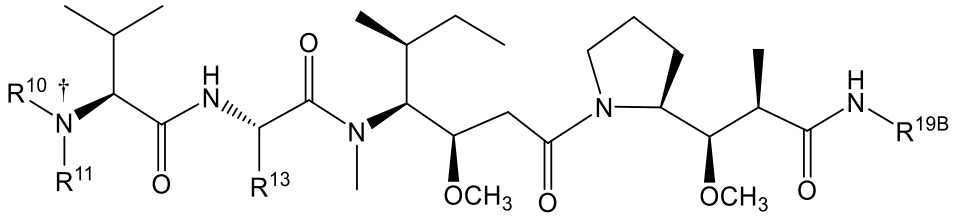


or a salt thereof, wherein subscript a' is 0, and A' is absent. In some examples, the Drug Linker compound has the structure:

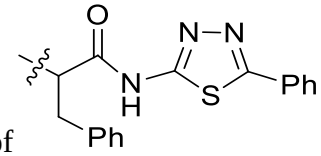


or a salt thereof, wherein subscript a' is 0, and A' is absent.

[0067] In some examples, D is a cytotoxic drug wherein the cytotoxic drug is a secondary amine-containing auristatin compound wherein the nitrogen atom of the secondary amine is the site of covalent attachment to the drug linker moiety and the secondary amine-containing auristatin compound has the structure of Formula $\mathbf{D_{F/E-3}}$:

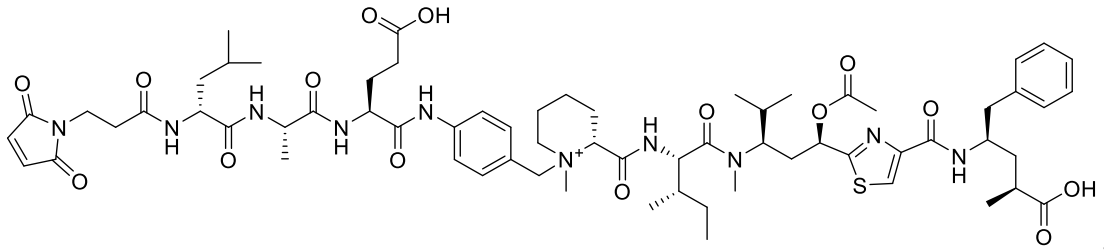


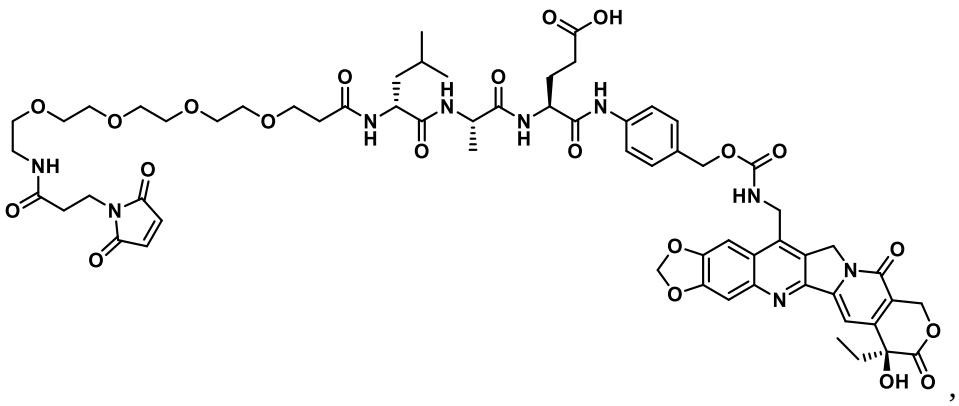
$\mathbf{D_{F/E-3}}$

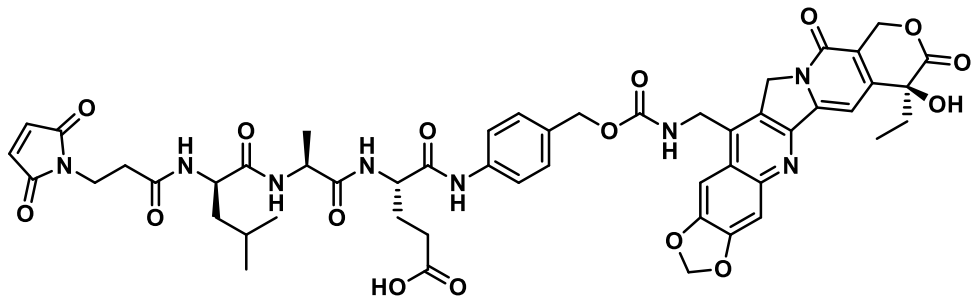
wherein the dagger indicates the site of covalent attachment of the nitrogen atom that provides the carbamate functional group; one of R^{10} and R^{11} is hydrogen and the other is methyl; R^{13} is isopropyl or $–CH_2\text{-}CH(CH_3)_2$; and R^{19B} is $–CH(CH_3)\text{-}CH(OH)\text{-}Ph$, $–CH(CO_2H)\text{-}CH(OH)\text{-}CH_3$, $–CH(CO_2H)\text{-}CH_2Ph$, $\text{-}CH(CH_2Ph)\text{-}2\text{-thiazolyl}$, $\text{-}CH(CH_2Ph)\text{-}2\text{-pyridyl}$, $\text{-}CH(CH_2\text{-p-Cl-Ph})$, $\text{-}CH(CO_2Me)\text{-}CH_2Ph$, $\text{-}CH(CO_2Me)\text{-}CH_2CH_2SCH_3$, $\text{-}CH(CH_2CH_2SCH_3)C(=O)NH\text{-quinol-3-yl}$, $\text{-}CH(CH_2Ph)C(=O)NH\text{-p-Cl-Ph}$, or R^{19B} has the structure of  , wherein the wavy line indicates covalent attachment to the remainder of the auristatin compound. In some examples, the secondary amine-containing auristatin compound is monomethylauristatin E (MMAE) or monomethylauristatin F (MMAF).

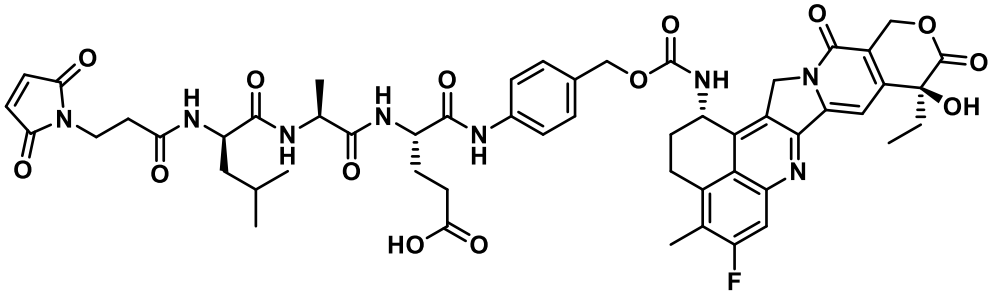
[0068] In some examples, the Peptide Cleavable Unit is a tripeptide having the sequence -P3-P2-P1-, wherein P1, P2, and P3 are each an amino acid, wherein: the P3 amino acid of the tripeptide is in the D-amino acid configuration; one of the P2 and P1 amino acids has an aliphatic side chain with hydrophobicity lower than that of leucine; and the other of the P2 and P1 amino acids is negatively charged. In some examples, the P3 amino acid is D-Leu or D-Ala. In some examples, one of the P2 or P1 amino acid has an aliphatic side chain with hydrophobicity no greater than that of valine, and the other of the P2 or P1 amino acid is negatively charged at plasma physiological pH. In some examples, the P2 amino acid has an aliphatic side chain with hydrophobicity no greater than that of valine, and the P1 amino acid is negatively charged at plasma physiological pH. In some examples, -P2-P1- is -Ala-Glu- or -Ala-Asp-. In some examples, -P3-P2-P1- is -D-Leu-Ala-Asp-, -D-Leu-Ala-Glu-, -D-Ala-Ala-Asp-, or -D-Ala-Ala-Glu-. In some examples, the P3 amino acid is D-Leu or D-

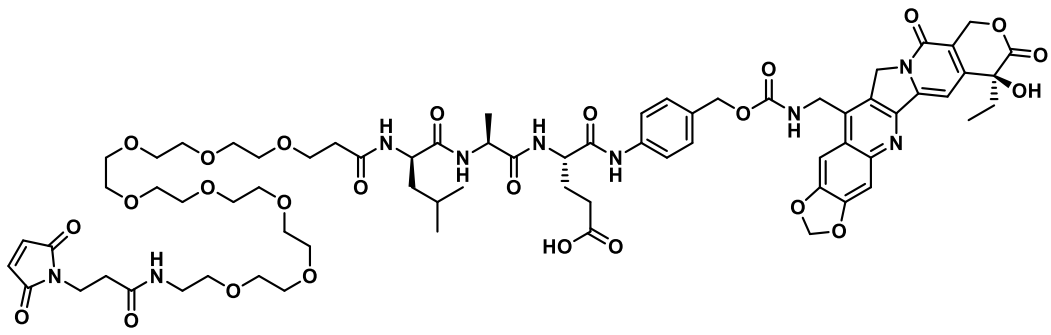
Ala, the P2 amino acid is Ala, Glu, or Asp, and the P1 amino acid is Ala, Glu, or Asp. In some examples, the Drug Linker compound has the structure of:


,


,

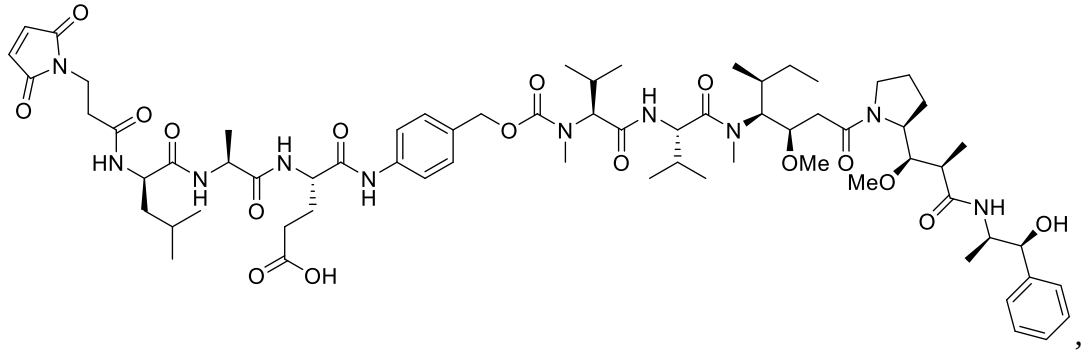

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, or

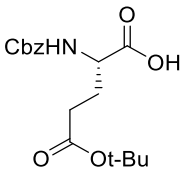
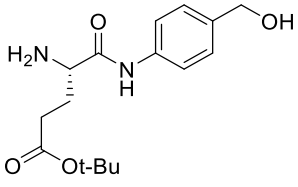
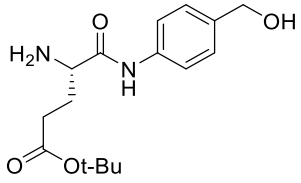
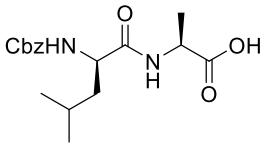
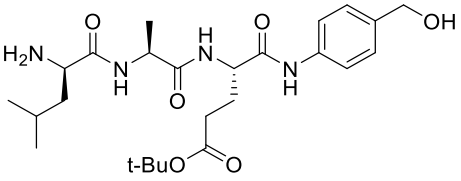
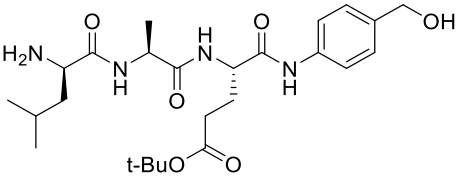

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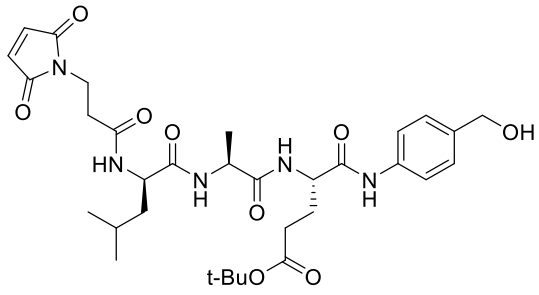
or a salt thereof.

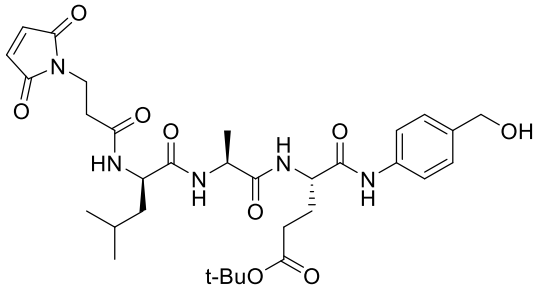
[0069] In another example, provided herein is a method of preparing a compound having the structure of

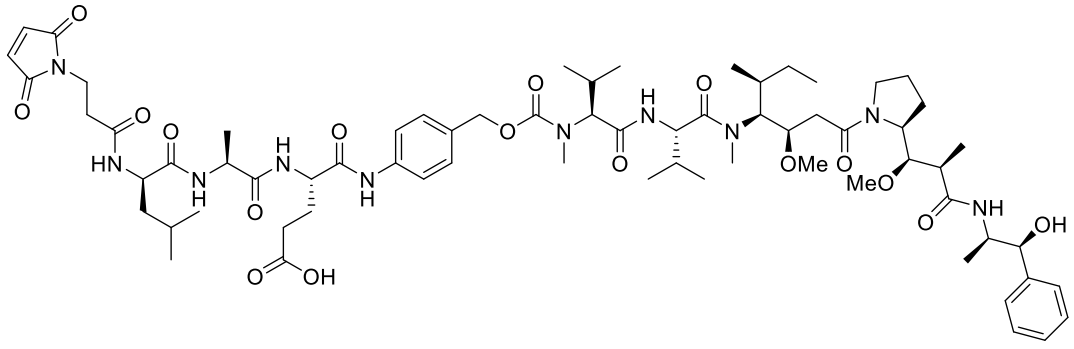


,

or a salt thereof, comprising a) reacting  , or a salt thereof, with 4-aminobenzyl alcohol followed by reduction to form  , or a salt thereof; b) reacting the  or salt thereof with  , or a salt thereof, followed by reduction to form  , or a salt thereof; c) reacting the  or salt thereof with 3-maleimidopropionic

acid to form  , or a salt thereof; and d) converting

the  or salt thereof to the compound

 or salt thereof.

[0070] In another example, antigen binding proteins (ABPs), including antigen binding fragments thereof, (*e.g.*, antibodies and antigen binding fragments thereof) that bind GPNMB, CD228, αvβ6, CD30, LIV1, or CD19 are provided herein. The antigen binding proteins and fragments contain an antigen binding domain that specifically binds to GPNMB, CD228, αvβ6, CD30, LIV1, or CD19, including to human GPNMB, CD228, αvβ6, CD30, LIV1 (*e.g.*, SEQ ID NO: 931), or CD19. In some examples, anti-GPNMB, anti-CD228, anti-αvβ6, anti-CD30, anti-LIV1, or anti-CD19 antibody-drug conjugates (ADCs) comprise an anti-GPNMB, anti-CD228, anti-αvβ6, anti-CD30, anti-LIV1, or anti-CD19 ABP as described above conjugated to a dLAE-MMAE (sometimes referred to herein as mp-dLAE-PABC-MMAE or mp-dLAE-MMAE) drug-linker. In some examples, these anti-GPNMB ADCs can be used to treat GPNMB-expressing cancers such as melanoma, lung, breast, head and neck, ovarian, sarcoma, mesothelioma, and cervical cancers. In some examples, these anti-CD228 ADCs can be used to treat CD228-expressing cancers such as melanoma,

pancreatic cancer, mesothelioma, colorectal cancer, lung cancer, thyroid cancer, breast cancer, choliangiocarcinoma, esophageal cancer and head and neck cancer. In some examples, these anti-αvβ6 ADCs can be used to treat αvβ6-expressing cancers such as non-small cell lung cancer (NSCLC), head and neck cancer, esophageal cancer, breast cancer, ovarian cancer, bladder cancer, skin cancer (SCC), ovarian cancer, cervical cancer, gastric cancer, and pancreatic cancer. In some examples, these anti-CD30 ADCs can be used to treat CD30-expressing diseases such as cancer, autoimmune diseases, and other infectious diseases. In further examples, these anti-CD30 ADCs can be used to treat solid and liquid tumors, and autoimmune diseases such as HIV and AIDS. In some examples, these anti-LIV1 ADCs can be used to treat LIV1-expressing cancers such as breast cancer, prostate cancer, ovarian cancer, endometrial cancer, cervical, liver, gastric, kidney, and squamous cell carcinomas (e.g., bladder, head and neck, esophageal, and lung, e.g., non-small cell lung cancer); skin cancers, e.g., melanoma; small lung cell carcinoma or lung carcinoid or non-squamous non-small cell lung cancer. Breast cancers include, e.g., HER2 positive breast cancers, including HER-low breast cancers, hormone responsive breast cancers, such as estrogen receptor positive breast cancers, and triple negative breast cancers. Other cancers treated with an mp-dLAE-PABC-MMAE LIV1-ADC include gastric and gastroesophageal adenocarcinoma, castration resistant prostate cancer. In some examples, these anti-CD19 ADCs can be used to treat CD19-expressing cancers such as chronic leukemia, lymphoma, multiple myeloma, B type acute lymphoblastic leukemia, chronic myelocytic leukemia, chronic lymphocytic leukemia, non-Hodgkin lymphoma and Hodgkin lymphoma, B cell lymphoma, or diffuse large B-cell lymphoma.

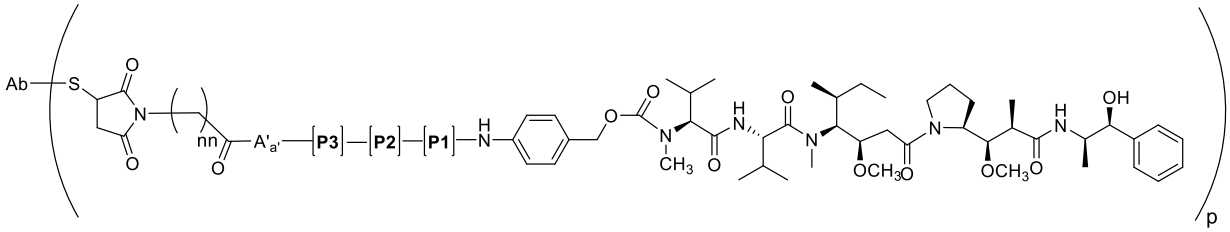
[0071] Those and other examples of the present disclosure are described in more detail in the following “Detailed Description of the Invention” and “Claims”.

BRIEF DESCRIPTION OF THE DRAWINGS

[0072] Figures 1A, 1B, 1C, and 1D. Tumor volume vs days post implant in a xenograft model treated with a series of 4-loaded ADCs having varying tripeptide sequences as the Peptide Cleavable Unit with drug-linker moieties represented by the formula of mp-P_3-P_2-P_1-PABC-MMAE at sub-curative doses compared to a subcurative dose of a 4-loaded ADC targeting the same cancer cell antigen and having drug-linker moieties represented by the formula of mc-val-cit-PABC-MMAE. Compounds in Figure 1A were tested at at 4 mg/kg. Compounds in

WHAT IS CLAIMED IS:

1. An antibody-drug conjugate comprising an antigen binding protein or fragment thereof that binds CD30, wherein the antibody-drug conjugate is represented by the structure:



or a pharmaceutically acceptable salt thereof, wherein:

Ab is the antigen binding protein or fragment thereof and p denotes a number from 1 to 12;

subscript nn is a number from 1 to 5;

subscript a' is 0, and A' is absent;

P1, P2, and P3 are each an amino acid, wherein:

a first one of the amino acids P1, P2, or P3 is negatively charged;

a second one of the amino acids P1, P2, or P3 has an aliphatic side chain with hydrophobicity no greater than that of leucine; and

a third one of the amino acids P1, P2, or P3 has hydrophobicity lower than that of leucine,

wherein the first one of the amino acids P1, P2, or P3 corresponds to any one of P1, P2, or P3, the second one of the amino acids P1, P2, or P3 corresponds to one of the two remaining amino acids P1, P2, or P3, and the third one of the amino acids P1, P2, or P3 corresponds to the last remaining amino acids P1, P2, or P3,

provided that -P3-P2-P1- is not -Glu-Val-Cit- or -Asp-Val-Cit-.

2. The antibody-drug conjugate of claim 1, wherein the antigen binding protein or fragment is cAC10.

3. The antibody-drug conjugate of claim 1 or 2 wherein the antigen binding protein or fragment comprises:

(i) the following 6 HVRs:

an HVR-H1 comprising the amino acid sequence of SEQ ID NO: 920;

an HVR-H2 comprising the amino acid sequence of SEQ ID NO: 921;

an HVR-H3 comprising the amino acid sequence of SEQ ID NO: 922;

an HVR-L1 comprising the amino acid sequence of SEQ ID NO: 923;

an HVR-L2 comprising the amino acid sequence of SEQ ID NO: 924; and

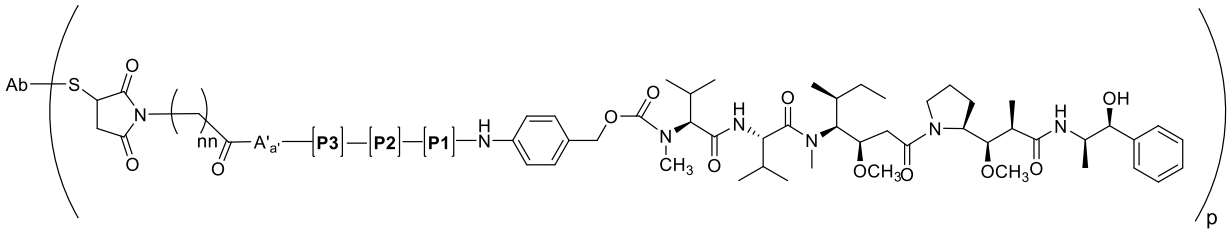
an HVR-L3 comprising the amino acid sequence of SEQ ID NO: 925; and/or

(ii) a VH and a VL, wherein the VH has at least 80%, 85%, 90%, 95% or 99% amino acid sequence identity to the amino acid sequence of SEQ ID NO: 926 and the VL has at least 80%, 85%, 90%, 95% or 99% amino acid sequence identity to the amino acid sequence of SEQ ID NO: 927; and/or

(iii) a VH and a VL, wherein the VH comprises the amino acid sequence of SEQ ID NO: 926 and the VL comprises the amino acid sequence of SEQ ID NO: 927; and/or

(iv) an HC comprising the amino acid sequence of SEQ ID NO: 928 or SEQ ID NO: 929 and an LC comprising the amino acid sequence of SEQ ID NO: 930.

4. An antibody-drug conjugate comprising an antigen binding protein or fragment thereof that binds GPNMB, wherein the antibody-drug conjugate is represented by the structure:



or a pharmaceutically acceptable salt thereof, wherein:

Ab is the antigen binding protein or fragment thereof and p denotes a number from 1 to 12;

subscript nn is a number from 1 to 5;

subscript a' is 0, and A' is absent;

P1, P2, and P3 are each an amino acid, wherein:

a first one of the amino acids P1, P2, or P3 is negatively charged;

a second one of the amino acids P1, P2, or P3 has an aliphatic side chain with hydrophobicity no greater than that of leucine; and

a third one of the amino acids P1, P2, or P3 has hydrophobicity lower than that of leucine,

wherein the first one of the amino acids P1, P2, or P3 corresponds to any one of P1, P2, or P3, the second one of the amino acids P1, P2, or P3 corresponds to one of the two remaining amino acids P1, P2, or P3, and the third one of the amino acids P1, P2, or P3 corresponds to the last remaining amino acids P1, P2, or P3,

provided that -P3-P2-P1- is not -Glu-Val-Cit- or -Asp-Val-Cit-.

5. The antibody-drug conjugate of claim 4, wherein the antigen binding protein or fragment comprises:

(i) the following 6 HVRs:

an HVR-H1 comprising the amino acid sequence of SEQ ID NO: 894;

an HVR-H2 comprising the amino acid sequence of SEQ ID NO: 895;

an HVR-H3 comprising the amino acid sequence of SEQ ID NO: 896;

an HVR-L1 comprising the amino acid sequence of SEQ ID NO: 897;

an HVR-L2 comprising the amino acid sequence of SEQ ID NO: 898; and

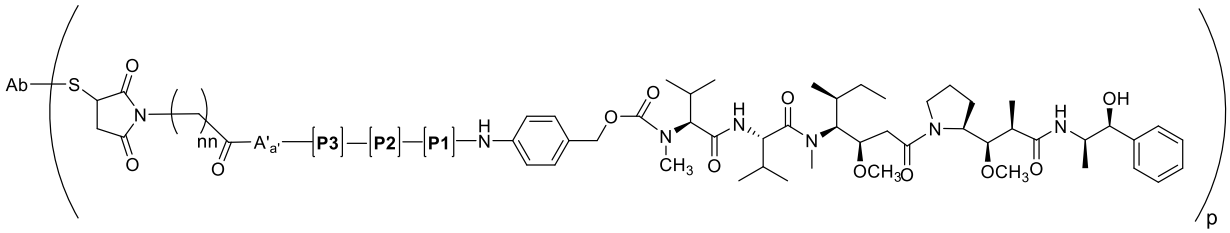
an HVR-L3 comprising the amino acid sequence of SEQ ID NO: 899; and/or

(ii) a VH and a VL, wherein the VH has at least 80%, 85%, 90%, 95% or 99% amino acid sequence identity to the amino acid sequence of SEQ ID NO: 892 and the VL has at least 80%, 85%, 90%, 95% or 99% amino acid sequence identity to the amino acid sequence of SEQ ID NO: 893; and/or

(iii) a VH and a VL, wherein the VH comprises the amino acid sequence of SEQ ID NO: 892 and the VL comprises the amino acid sequence of SEQ ID NO: 893; and/or

(iv) an HC comprising the amino acid sequence of SEQ ID NO: 890 and an LC comprising the amino acid sequence of SEQ ID NO: 891.

6. An antibody-drug conjugate comprising an antigen binding protein or fragment thereof that binds CD228, wherein the antibody-drug conjugate is represented by the structure:



or a pharmaceutically acceptable salt thereof, wherein:

Ab is the antigen binding protein or fragment thereof and p denotes a number from 1 to 12;

subscript nn is a number from 1 to 5;

subscript a' is 0, and A' is absent;

P1, P2, and P3 are each an amino acid, wherein:

a first one of the amino acids P1, P2, or P3 is negatively charged;

a second one of the amino acids P1, P2, or P3 has an aliphatic side chain with hydrophobicity no greater than that of leucine; and

a third one of the amino acids P1, P2, or P3 has hydrophobicity lower than that of leucine,

wherein the first one of the amino acids P1, P2, or P3 corresponds to any one of P1, P2, or P3, the second one of the amino acids P1, P2, or P3 corresponds to one of the two remaining amino acids P1, P2, or P3, and the third one of the amino acids P1, P2, or P3 corresponds to the last remaining amino acids P1, P2, or P3,

provided that -P3-P2-P1- is not -Glu-Val-Cit- or -Asp-Val-Cit-.

7. The antibody-drug conjugate of claim 6, wherein the antigen binding protein or fragment comprises:

(i) the following 6 HVRs:

an HVR-H1 comprising the amino acid sequence of SEQ ID NO: 900;

an HVR-H2 comprising the amino acid sequence of SEQ ID NO: 901;

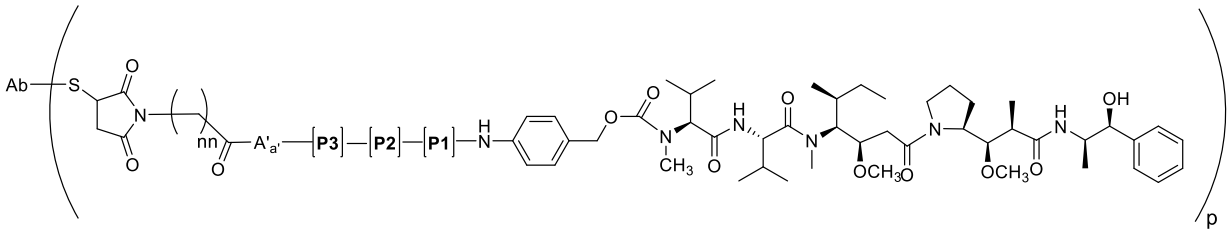
an HVR-H3 comprising the amino acid sequence of SEQ ID NO: 902;
an HVR-L1 comprising the amino acid sequence of SEQ ID NO: 903;
an HVR-L2 comprising the amino acid sequence of SEQ ID NO: 904; and
an HVR-L3 comprising the amino acid sequence of SEQ ID NO: 905; and/or

(ii) a VH and a VL, wherein the VH has at least 80%, 85%, 90%, 95% or 99% amino acid sequence identity to the amino acid sequence of SEQ ID NO: 906 and the VL has at least 80%, 85%, 90%, 95% or 99% amino acid sequence identity to the amino acid sequence of SEQ ID NO: 907; and/or

(iii) a VH and a VL, wherein the VH comprises the amino acid sequence of SEQ ID NO: 906 and the VL comprises the amino acid sequence of SEQ ID NO: 907; and/or

(iv) an HC comprising the amino acid sequence of SEQ ID NO: 908 and an LC comprising the amino acid sequence of SEQ ID NO: 909.

8. An antibody-drug conjugate comprising an antigen binding protein or fragment thereof that binds αvβ6, wherein the antibody-drug conjugate is represented by the structure:



or a pharmaceutically acceptable salt thereof, wherein:

Ab is the antigen binding protein or fragment thereof and p denotes a number from 1 to 12;

subscript nn is a number from 1 to 5;

subscript a' is 0, and A' is absent;

P1, P2, and P3 are each an amino acid, wherein:

a first one of the amino acids P1, P2, or P3 is negatively charged;

a second one of the amino acids P1, P2, or P3 has an aliphatic side chain with hydrophobicity no greater than that of leucine; and

a third one of the amino acids P1, P2, or P3 has hydrophobicity lower than that of leucine,

wherein the first one of the amino acids P1, P2, or P3 corresponds to any one of P1, P2, or P3, the second one of the amino acids P1, P2, or P3 corresponds to one of the two remaining amino acids P1, P2, or P3, and the third one of the amino acids P1, P2, or P3 corresponds to the last remaining amino acids P1, P2, or P3,

provided that -P3-P2-P1- is not -Glu-Val-Cit- or -Asp-Val-Cit-.

9. The antibody-drug conjugate of claim 8, wherein the antigen binding protein or fragment comprises:

(i) the following 6 HVRs:

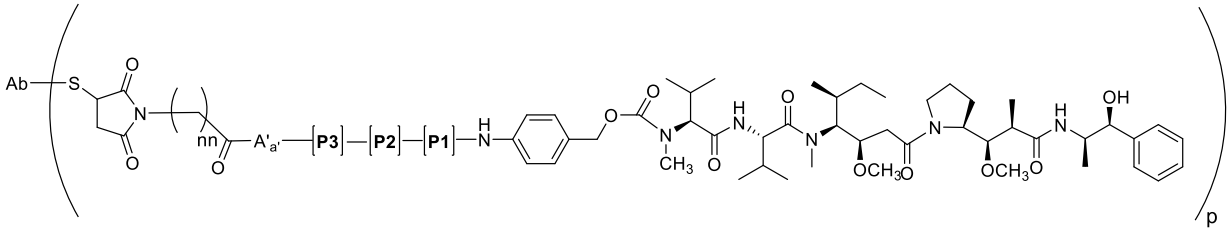
an HVR-H1 comprising the amino acid sequence of SEQ ID NO: 914;
an HVR-H2 comprising the amino acid sequence of SEQ ID NO: 915;
an HVR-H3 comprising the amino acid sequence of SEQ ID NO: 916;
an HVR-L1 comprising the amino acid sequence of SEQ ID NO: 917;
an HVR-L2 comprising the amino acid sequence of SEQ ID NO: 918; and
an HVR-L3 comprising the amino acid sequence of SEQ ID NO: 919; and/or

(ii) a VH and a VL, wherein the VH has at least 80%, 85%, 90%, 95% or 99% amino acid sequence identity to the amino acid sequence of SEQ ID NO: 912 and the VL has at least 80%, 85%, 90%, 95% or 99% amino acid sequence identity to the amino acid sequence of SEQ ID NO: 913; and/or

(iii) a VH and a VL, wherein the VH comprises the amino acid sequence of SEQ ID NO: 912 and the VL comprises the amino acid sequence of SEQ ID NO: 913; and/or

(iv) an HC comprising the amino acid sequence of SEQ ID NO: 910 and an LC comprising the amino acid sequence of SEQ ID NO: 911.

10. An antibody-drug conjugate comprising an antigen binding protein or fragment thereof that binds LIV1, wherein the antibody-drug conjugate is represented by the structure:



or a pharmaceutically acceptable salt thereof, wherein:

Ab is the antigen binding protein or fragment thereof and p denotes a number from 1 to 12;

subscript nn is a number from 1 to 5;

subscript a' is 0, and A' is absent;

P1, P2, and P3 are each an amino acid, wherein:

a first one of the amino acids P1, P2, or P3 is negatively charged;

a second one of the amino acids P1, P2, or P3 has an aliphatic side chain with hydrophobicity no greater than that of leucine; and

a third one of the amino acids P1, P2, or P3 has hydrophobicity lower than that of leucine,

wherein the first one of the amino acids P1, P2, or P3 corresponds to any one of P1, P2, or P3, the second one of the amino acids P1, P2, or P3 corresponds to one of the two remaining amino acids P1, P2, or P3, and the third one of the amino acids P1, P2, or P3 corresponds to the last remaining amino acids P1, P2, or P3,

provided that -P3-P2-P1- is not -Glu-Val-Cit- or -Asp-Val-Cit-.

11. The antibody-drug conjugate of claim 10, wherein the antigen binding protein or fragment comprises:

(i) the following 6 HVRs:

an HVR-H1 comprising the amino acid sequence of SEQ ID NO: 936;

an HVR-H2 comprising the amino acid sequence of SEQ ID NO: 937;

an HVR-H3 comprising the amino acid sequence of SEQ ID NO: 938;

an HVR-L1 comprising the amino acid sequence of SEQ ID NO: 939;

an HVR-L2 comprising the amino acid sequence of SEQ ID NO: 940; and

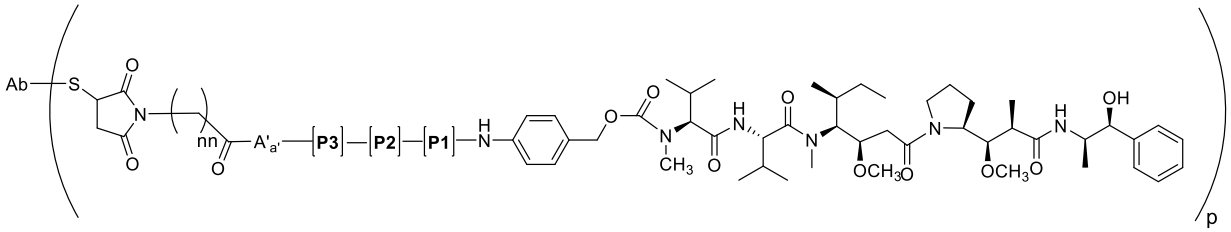
an HVR-L3 comprising the amino acid sequence of SEQ ID NO: 941; and/or

(ii) a VH and a VL, wherein the VH has at least 80%, 85%, 90%, 95% or 99% amino acid sequence identity to the amino acid sequence of SEQ ID NO: 934 and the VL has at least 80%, 85%, 90%, 95% or 99% amino acid sequence identity to the amino acid sequence of SEQ ID NO: 935; and/or

(iii) a VH and a VL, wherein the VH comprises the amino acid sequence of SEQ ID NO: 934 and the VL comprises the amino acid sequence of SEQ ID NO: 935; and/or

(iv) an HC comprising the amino acid sequence of SEQ ID NO: 932 and an LC comprising the amino acid sequence of SEQ ID NO: 933.

12. An antibody-drug conjugate comprising an antigen binding protein or fragment thereof that binds CD19, wherein the antibody-drug conjugate is represented by the structure:



or a pharmaceutically acceptable salt thereof, wherein:

Ab is the antigen binding protein or fragment thereof and p denotes a number from 1 to 12;

subscript nn is a number from 1 to 5;

subscript a' is 0, and A' is absent;

P1, P2, and P3 are each an amino acid, wherein:

a first one of the amino acids P1, P2, or P3 is negatively charged;

a second one of the amino acids P1, P2, or P3 has an aliphatic side chain with hydrophobicity no greater than that of leucine; and

a third one of the amino acids P1, P2, or P3 has hydrophobicity lower than that of leucine,

wherein the first one of the amino acids P1, P2, or P3 corresponds to any one of P1, P2, or P3, the second one of the amino acids P1, P2, or P3 corresponds to one of the two remaining amino acids P1, P2, or P3, and the third one of the amino acids P1, P2, or P3 corresponds to the last remaining amino acids P1, P2, or P3,

provided that -P3-P2-P1- is not -Glu-Val-Cit- or -Asp-Val-Cit-.

13. The antibody-drug conjugate of claim 12, wherein the antigen binding protein or fragment comprises:

(i) the following 6 HVRs:

an HVR-H1 comprising the amino acid sequence of SEQ ID NO: 944;

an HVR-H2 comprising the amino acid sequence of SEQ ID NO: 945;

an HVR-H3 comprising the amino acid sequence of SEQ ID NO: 946;

an HVR-L1 comprising the amino acid sequence of SEQ ID NO: 948;

an HVR-L2 comprising the amino acid sequence of SEQ ID NO: 949; and

an HVR-L3 comprising the amino acid sequence of SEQ ID NO: 950; and/or

(ii) a VH and a VL, wherein the VH has at least 80%, 85%, 90%, 95% or 99% amino acid sequence identity to the amino acid sequence of SEQ ID NO: 943 and the VL has at least 80%, 85%, 90%, 95% or 99% amino acid sequence identity to the amino acid sequence of SEQ ID NO: 947; and/or

(iii) a VH and a VL, wherein the VH comprises the amino acid sequence of SEQ ID NO: 943 and the VL comprises the amino acid sequence of SEQ ID NO: 947; and/or

(iv) an HC comprising the amino acid sequence of SEQ ID NO: 951 and an LC comprising the amino acid sequence of SEQ ID NO: 952.

14. The antibody-drug conjugate of any one of claims 1-13, wherein subscript nn is 2.

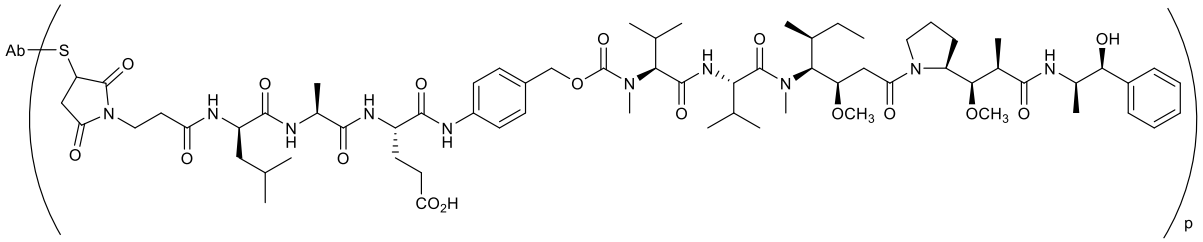
15. The antibody-drug conjugate of any one of claims 1-14, wherein:

the P3 amino acid of the tripeptide is in the D-amino acid configuration;

one of the P2 and P1 amino acids has an aliphatic side chain with hydrophobicity lower than that of leucine; and

the other of the P2 and P1 amino acids is negatively charged.

16. The antibody-drug conjugate of any one of claims 1-15, wherein the antibody-drug conjugate is represented by the structure:



or a pharmaceutically acceptable salt thereof,

wherein Ab is the antigen binding protein or fragment thereof and p denotes a number from 1 to 12.

17. A pharmaceutical composition comprising the antibody-drug conjugate of any of claims 1-16 and a pharmaceutically acceptable carrier.

18. Use of an antibody-drug conjugate of any one of claims 1-3 in the manufacture of a medicament for treating a CD30-expressing disease or condition.

19. Use of an antibody-drug conjugate of claim 4 or 5 in the manufacture of a medicament for treating a GPNMB-expressing disease or condition.

20. Use of an antibody-drug conjugate of claim 6 or 7 in the manufacture of a medicament for treating a CD228-expressing cancer.

21. Use of an antibody-drug conjugate of claim 8 or 9 in the manufacture of a medicament for treating a αvβ6-expressing cancer.

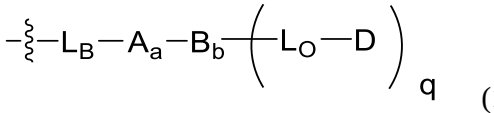
22. Use of an antibody-drug conjugate of claim 10 or 11 in the manufacture of a medicament for treating a LIV1-expressing cancer.

23. Use of an antibody-drug conjugate of claim 12 or 13 in the manufacture of a medicament for treating a CD19-expressing cancer.

24. A Ligand Drug Conjugate composition represented by Formula 1:

$$L\text{-}[LU\text{-}D']_p \qquad (1)$$

or a pharmaceutically acceptable salt thereof, wherein
L is a Ligand Unit;
LU is a Linker Unit;
D' represents from 1 to 4 Drug Units (D) in each drug linker moiety of formula -LU-D'; and
subscript p is a number from 1 to 12, from 1 to 10 or from 1 to 8 or is about 4 or about 8,
wherein the Ligand Unit is from an antibody or an antigen-binding fragment of an antibody, wherein the antibody or the antigen-binding fragment is capable of selective binding to an antigen of tumor tissue for subsequent release of the Drug Unit(s) as a free drug,
wherein the drug linker moiety of formula -LU-D' in each of the Ligand Drug Conjugate compounds of the composition has the structure of Formula 1A:



(1A)

or a salt thereof,

wherein the wavy line indicates covalent attachment to L;

D is the Drug Unit;

L_B is a ligand covalent binding moiety;

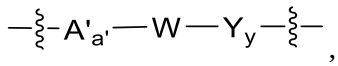
A is a first optional Stretcher Unit;

subscript a is 0 or 1, indicating the absence or presence of A, respectively;

B is an optional Branching Unit;

subscript b is 0 or 1, indicating the absence or presence of B, respectively;

L_O is a secondary linker moiety, wherein the secondary linker has the formula of;



wherein the wavy line adjacent to Y indicates the site of covalent attachment of L_O to the Drug Unit and the wavy line adjacent to A' indicates the site of covalent attachment of L_O to the remainder of the drug linker moiety;

A' is a second optional Stretcher Unit, which when present and in the absence of B becomes a subunit of A,

subscript a' is 0 or 1, indicating the absence or presence of A', respectively,

W is a Peptide Cleavable Unit, wherein the Peptide Cleavable Unit comprises a tripeptide having the sequence -P3-P2-P1-, wherein P1, P2, and P3 are each an amino acid, wherein:

a first one of the amino acids P1, P2, or P3 is negatively charged or is serine;

a second one of the amino acids P1, P2, or P3 has an aliphatic side chain with hydrophobicity no greater than that of leucine, or is glycine or serine or proline; and

a third one of the amino acids P1, P2, or P3 has hydrophobicity lower than that of leucine, or is proline,

wherein the first one of the amino acids P1, P2, or P3 corresponds to any one of P1, P2, or P3, the second one of the amino acids P1, P2, or P3 corresponds to one of the two remaining amino acids P1, P2, or P3, and the third one of the amino acids P1, P2, or P3 corresponds to the last remaining amino acids P1, P2, or P3,

provided that -P3-P2-P1- is not -Glu-Val-Cit- or -Asp-Val-Cit-;

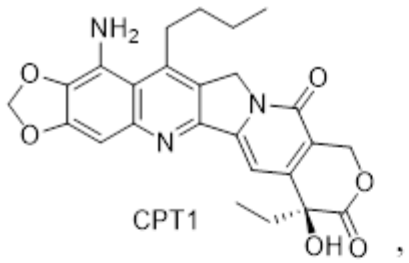
each Y when present is a self-immolative Spacer Unit;

subscript y is 0, 1 or 2 indicating the absence or presence of 1 or 2 of Y, respectively; and subscript q is an integer ranging from 1 to 3, and

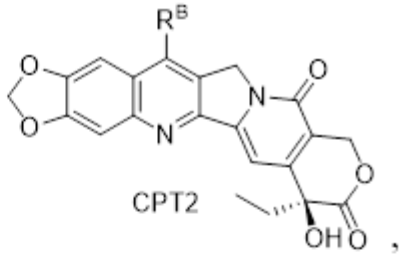
provided that subscript q is 1 when subscript b is 0 and subscript q is 2 or 3 when subscript b is 1; and

wherein the Ligand Drug Conjugate compounds of the composition have the structure of Formula A1 in which subscript p is replaced by subscript p', wherein subscript p' is an integer from 1 to 12, 1 to 10 or 1 to 8 or is 4 or 8.

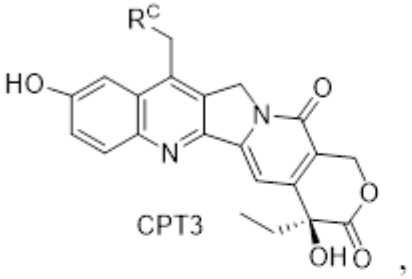
25. The Ligand Drug Conjugate composition of claim 24, wherein D incorporates the structure of a camptothecin selected from the group consisting of



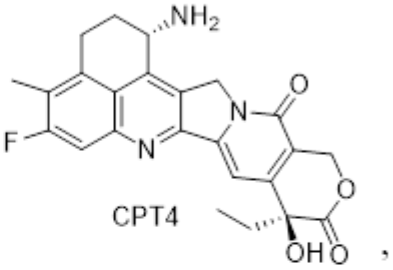
CPT1 ,



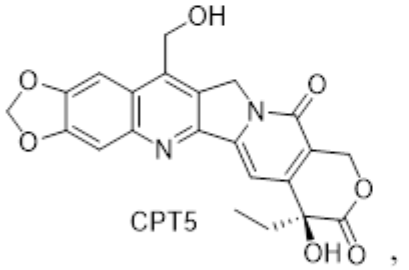
CPT2 ,



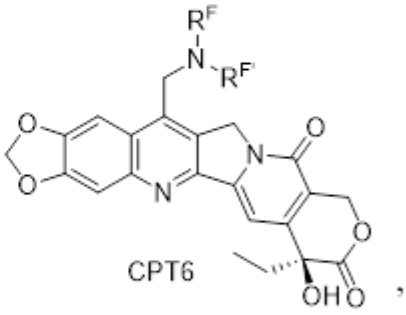
CPT3 ,



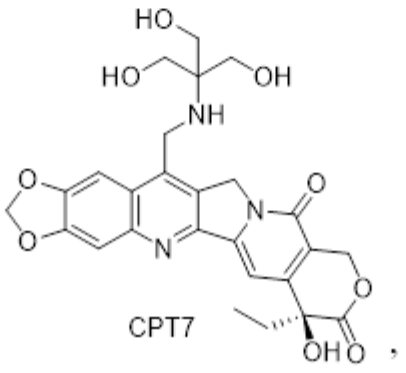
CPT4 ,



CPT5 ,



CPT6 , and



CPT7 ,

wherein

R^B is selected from the group consisting of H, C_1-C_8 alkyl, C_1-C_8 haloalkyl, C_3-C_8 cycloalkyl, (C_3-C_8 cycloalkyl)-C_1-C_4 alkyl, phenyl, and phenyl-C_1-C_4 alkyl;

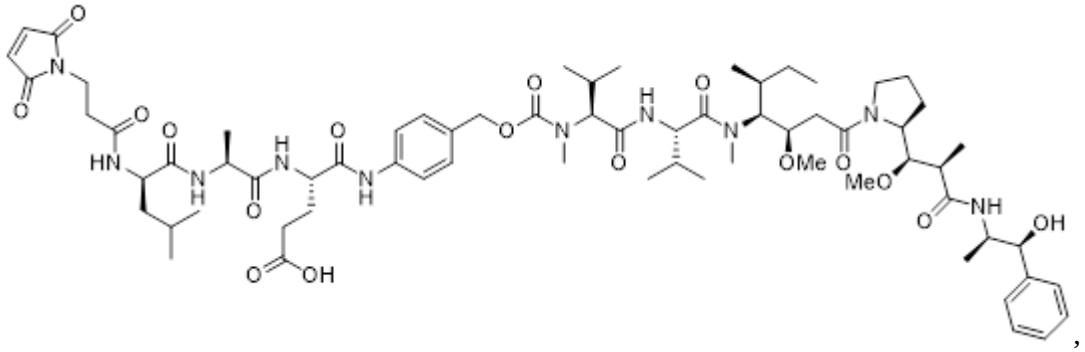
R^C is selected from the group consisting of C_1-C_6 alkyl and C_3-C_6 cycloalkyl; and

each R^F and $R^{F'}$ is independently selected from the group consisting of -H, C_1-C_8 alkyl, C_1-C_8 hydroxyalkyl, C_1-C_8 aminoalkyl, (C_1-C_4 alkylamino)-C_1-C_8 alkyl-, *N*,*N*-(C_1-C_4 hydroxyalkyl)(C_1-C_4 alkyl)amino-C_1-C_8 alkyl-, *N*,*N*-di(C_1-C_4 alkyl)amino-C_1-C_8 alkyl-, *N*-(C_1-C_4 hydroxyalkyl)-C_1-C_8 aminoalkyl, C_1-C_8 alkyl-C(O)-, C_1-C_8 hydoxyalkyl-C(O)-, C_1-C_8 aminoalkyl-C(O)-, C_3-C_{10} cycloalkyl, (C_3-C_{10} cycloalkyl)-C_1-C_4 alkyl-, C_3-C_{10} heterocycloalkyl, (C_3-C_{10} heterocycloalkyl)-C_1-C_4 alkyl-, phenyl, phenyl-C_1-C_4 alkyl-, diphenyl-C_1-C_4 alkyl-, heteroaryl, and heteroaryl-C_1-C_4 alkyl-, or

R^F and $R^{F'}$ are combined with the nitrogen atom to which each is attached to form a 5-, 6- or 7-membered ring having 0 to 3 substituents selected from the group consisting of halogen, C_1-C_4 alkyl, -OH, -OC_1-C_4 alkyl, -NH_2, -NH-C_1-C_4 alkyl, -N(C_1-C_4 alkyl)$_2$; and

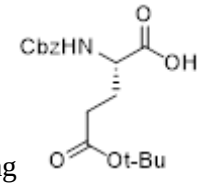
wherein the cycloalkyl, heterocycloalkyl, phenyl and heteroaryl portions of R^B, R^C, R^F and $R^{F'}$ are substituted with from 0 to 3 substituents selected from the group consisting of halogen, C_1-C_4 alkyl, -OH, -OC_1-C_4 alkyl, -NH_2, -NHC_1-C_4 alkyl, and -N(C_1-C_4 alkyl)$_2$.

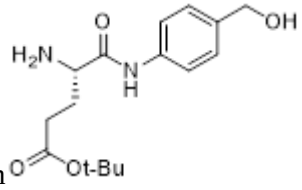
26. A method of preparing a compound having the structure of

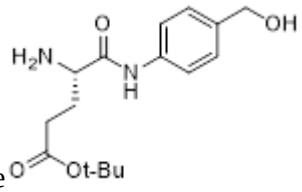
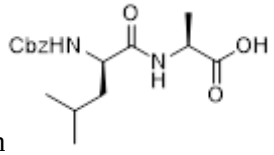
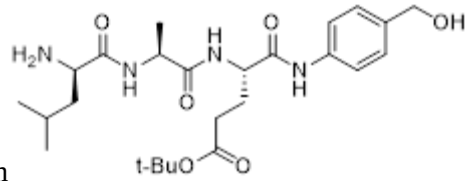


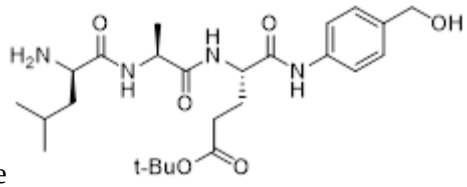
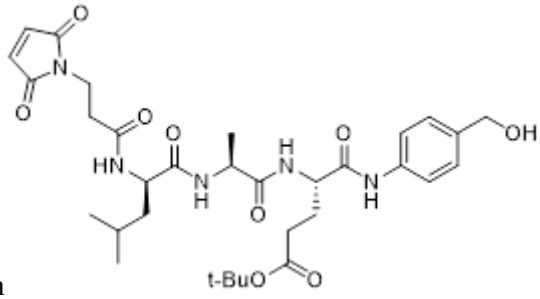
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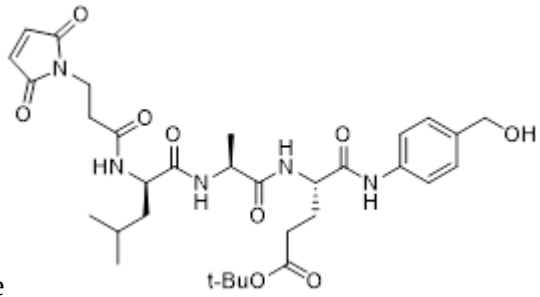
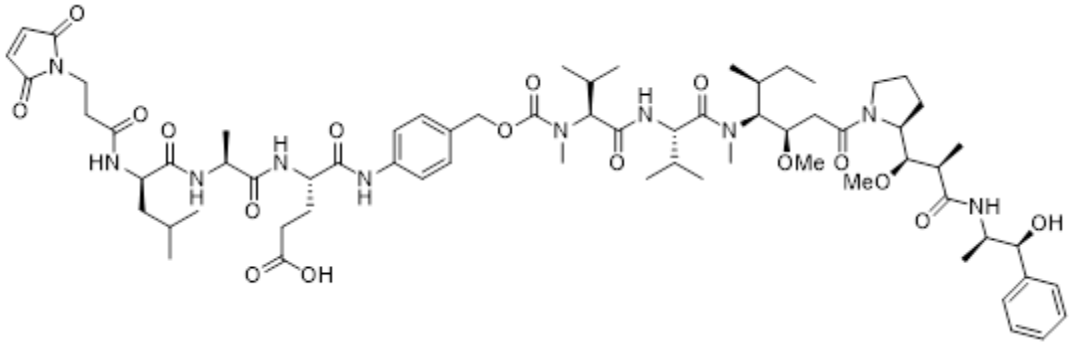
or a salt thereof, comprising

a) reacting  , or a salt thereof, with 4-aminobenzyl alcohol followed by

reduction to form  , or a salt thereof;

b) reacting the  or salt thereof with  , or a salt thereof, followed by reduction to form  , or a salt thereof;

c) reacting the  or salt thereof with 3-maleimidopropionic acid to form  , or a salt thereof; and

d) converting the  or salt thereof to the compound  or salt thereof.

27. An antibody-drug conjugate of any one of claims 1-16, for use in therapy