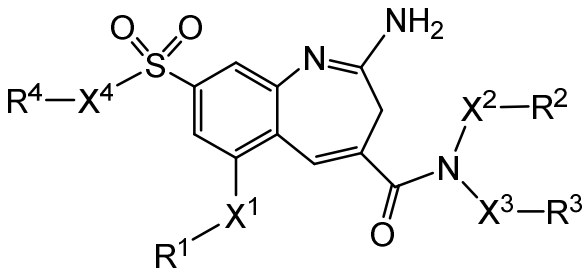
CLAIMS:

1. An 8-sulfonyl-2-amino-thienoazepine-linker compound of Formula II:



II

wherein

R^1, R^2, R^3, and R^4 are independently selected from the group consisting of H, C_1-C_{12} alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_3-C_{12} carbocyclyl, C_6-C_{20} aryl, C_2-C_9 heterocyclyl, and C_1-C_{20} heteroaryl, where alkyl, alkenyl, alkynyl, carbocyclyl, aryl, heterocyclyl, and heteroaryl are independently and optionally substituted with one or more groups selected from:

–(C_1-C_{12} alkyldiyl)–N(R^5)–*;

–(C_1-C_{12} alkyldiyl)–N(R^5)$_2$;

–(C_1-C_{12} alkyldiyl)–OR^5;

–(C_3-C_{12} carbocyclyl);

–(C_3-C_{12} carbocyclyl)–*;

–(C_3-C_{12} carbocyclyl)–(C_1-C_{12} alkyldiyl)–NR^5–*;

–(C_3-C_{12} carbocyclyl)–(C_1-C_{12} alkyldiyl)–N(R^5)$_2$;

–(C_3-C_{12} carbocyclyl)–NR^5–C(=NR^5)NR^5–*;

–(C_6-C_{20} aryl);

–(C_6-C_{20} aryldiyl)–*;

–(C_6-C_{20} aryldiyl)–N(R^5)–*;

–(C_6-C_{20} aryldiyl)–(C_1-C_{12} alkyldiyl)–N(R^5)–*;

–(C_6-C_{20} aryldiyl)–(C_1-C_{12} alkyldiyl)–(C_2-C_{20} heterocyclyldiyl)–*;

–(C_6-C_{20} aryldiyl)–(C_1-C_{12} alkyldiyl)–N(R^5)$_2$;

–(C_6-C_{20} aryldiyl)–(C_1-C_{12} alkyldiyl)–NR^5–C(=NR^{5a})N(R^5)–*;

–(C_2-C_{20} heterocyclyl);

–(C_2-C_{20} heterocyclyl)–*;

–(C_2-C_9 heterocyclyl)–(C_1-C_{12} alkyldiyl)–NR^5–*;

–(C_2-C_9 heterocyclyl)–(C_1-C_{12} alkyldiyl)–$N(R^5)_2$;

–(C_2-C_9 heterocyclyl)–C(=O)–(C_1-C_{12} alkyldiyl)–$N(R^5)$–*;

–(C_2-C_9 heterocyclyl)–NR^5–$C(=NR^{5a})NR^5$–*;

–(C_2-C_9 heterocyclyl)–NR^5–(C_6-C_{20} aryldiyl)–(C_1-C_{12} alkyldiyl)–$N(R^5)$–*;

–(C_2-C_9 heterocyclyl)–(C_6-C_{20} aryldiyl)–*;

–(C_1-C_{20} heteroaryl);

–(C_1-C_{20} heteroaryldiyl)–*;

–(C_1-C_{20} heteroaryl)–(C_1-C_{12} alkyldiyl)–$N(R^5)$–*;

–(C_1-C_{20} heteroaryl)–(C_1-C_{12} alkyldiyl)–$N(R^5)_2$;

–(C_1-C_{20} heteroaryl)–NR^5–$C(=NR^{5a})N(R^5)$–*;

–(C_1-C_{20} heteroaryl)–$N(R^5)C(=O)$–(C_1-C_{12} alkyldiyl)–$N(R^5)$–*;

–C(=O)–*;

–C(=O)–(C_1-C_{12} alkyldiyl)–$N(R^5)$–*;

–C(=O)–(C_2-C_{20} heterocyclyldiyl)–*;

–$C(=O)N(R^5)_2$;

–$C(=O)N(R^5)$–*;

–$C(=O)N(R^5)$–(C_1-C_{12} alkyldiyl)–$N(R^5)C(=O)R^5$;

–$C(=O)N(R^5)$–(C_1-C_{12} alkyldiyl)–$N(R^5)C(=O)N(R^5)_2$;

–$C(=O)NR^5$–(C_1-C_{12} alkyldiyl)–$N(R^5)CO_2R^5$;

–$C(=O)NR^5$–(C_1-C_{12} alkyldiyl)–$N(R^5)C(=NR^{5a})N(R^5)_2$;

–$C(=O)NR^5$–(C_1-C_{12} alkyldiyl)–$NR^5C(=NR^{5a})R^5$;

–$C(=O)NR^5$–(C_1-C_8 alkyldiyl)–NR^5(C_2-C_5 heteroaryl);

–$C(=O)NR^5$–(C_1-C_{20} heteroaryldiyl)–$N(R^5)$–*;

–$C(=O)NR^5$–(C_1-C_{20} heteroaryldiyl)–*;

–$C(=O)NR^5$–(C_1-C_{20} heteroaryldiyl)–(C_1-C_{12} alkyldiyl)–$N(R^5)_2$;

–$C(=O)NR^5$–(C_1-C_{20} heteroaryldiyl)–(C_2-C_{20} heterocyclyldiyl)–$C(=O)NR^5$–(C_1-C_{12} alkyldiyl)–NR^5–*;

–$N(R^5)_2$;

–$N(R^5)$–*;

–$N(R^5)C(=O)R^5$;

–$N(R^5)C(=O)$–*;

–$N(R^5)C(=O)N(R^5)_2$;

–$N(R^5)C(=O)N(R^5)$–*;

–$N(R^5)CO_2R^5$;

–$NR^5C(=NR^{5a})N(R^5)_2$;

–$NR^5C(=NR^{5a})N(R^5)$–*;

–$NR^5C(=NR^{5a})R^5$;

–$N(R^5)C(=O)$–(C_1-C_{12} alkyldiyl)–$N(R^5)$–*;

–$N(R^5)$–(C_2-C_5 heteroaryl);

–$N(R^5)$–$S(=O)_2$–(C_1-C_{12} alkyl);

–O–(C_1-C_{12} alkyl);

–O–(C_1-C_{12} alkyldiyl)–$N(R^5)_2$;

–O–(C_1-C_{12} alkyldiyl)–$N(R^5)$–*;

–O–$C(=O)N(R^5)_2$;

–O–$C(=O)N(R^5)$–*;

–O–(R^5)–*;

–OR^5;

–$S(=O)_2$–(C_2-C_{20} heterocyclyldiyl)–*;

–$S(=O)_2$–(C_2-C_{20} heterocyclyldiyl)–(C_1-C_{12} alkyldiyl)–$N(R^5)_2$;

–$S(=O)_2$–(C_2-C_{20} heterocyclyldiyl)–(C_1-C_{12} alkyldiyl)–NR^5–*; and

–$S(=O)_2$–(C_2-C_{20} heterocyclyldiyl)–(C_1-C_{12} alkyldiyl)–OH;

or R^2 and R^3 together form a 5- or 6-membered heterocyclyl ring;

X^1, X^2, X^3, and X^4 are independently selected from the group consisting of a bond, C(=O), $C(=O)N(R^5)$, O, $N(R^5)$, S, $S(O)_2$, and $S(O)_2N(R^5)$;

R^5 is independently selected from the group consisting of H, C_6-C_{20} aryl, C_3-C_{12} carbocyclyl, C_6-C_{20} aryldiyl, C_1-C_{12} alkyl, and C_1-C_{12} alkyldiyl, or two R^5 groups together form a 5- or 6-membered heterocyclyl ring;

R^{5a} is selected from the group consisting of C_6-C_{20} aryl and C_1-C_{20} heteroaryl;

where the asterisk * indicates the attachment site of L, and where one of R^1, R^2, R^3 and R^4 is attached to L;

L is the linker selected from the group consisting of:

Q–C(=O)–PEG–;

Q–C(=O)–PEG–C(=O)N(R^6)–(C_1-C_{12} alkyldiyl)–C(=O)–Gluc–;

Q–C(=O)–PEG–O–;

Q–C(=O)–PEG–O–C(=O)–;

Q–C(=O)–PEG–C(=O)–;

Q–C(=O)–PEG–C(=O)–PEP–;

Q–C(=O)–PEG–N(R^6)–;

Q–C(=O)–PEG–N(R^6)–C(=O)–;

Q–C(=O)–PEG–N(R^6)–PEG–C(=O)–PEP–;

Q–C(=O)–PEG–N^+(R^6)$_2$–PEG–C(=O)–PEP–;

Q–C(=O)–PEG–C(=O)–PEP–N(R^6)–(C_1-C_{12} alkyldiyl)–;

Q–C(=O)–PEG–C(=O)–PEP–N(R^6)–(C_1-C_{12} alkyldiyl)N(R^6)C(=O)–(C_2-C_5 monoheterocyclyldiyl)–;

Q–C(=O)–PEG–SS–(C_1-C_{12} alkyldiyl)–OC(=O)–;

Q–C(=O)–PEG–SS–(C_1-C_{12} alkyldiyl)–C(=O)–;

Q–(CH_2)$_m$–C(=O)N(R^6)–PEG–;

Q–(CH_2)$_m$–C(=O)N(R^6)–PEG–C(=O)N(R^6)–(C_1-C_{12} alkyldiyl)–C(=O)–Gluc–;

Q–(CH_2)$_m$–C(=O)N(R^6)–PEG–O–;

Q–(CH_2)$_m$–C(=O)N(R^6)–PEG–O–C(=O)–;

Q–(CH_2)$_m$–C(=O)N(R^6)–PEG–C(=O)–;

Q–(CH_2)$_m$–C(=O)N(R^6)–PEG–N(R^5)–;

Q–(CH_2)$_m$–C(=O)N(R^6)–PEG–N(PEG–CO_2H)–PEG–N(R^5)–;

Q–(CH_2)$_m$–C(=O)N(R^6)–PEG–C(=O)N(PEG–CO_2H)–PEG–N(R^5)–;

Q–(CH_2)$_m$–C(=O)N(R^6)–PEG–N(R^5)–C(=O)–;

$Q–(CH_2)_m–C(=O)N(R^6)–PEG–N(PEG–CO_2H)–PEG–C(=O)–$;

$Q–(CH_2)_m–C(=O)N(R^6)–PEG–C(=O)N(PEG–CO_2H)–PEG–C(=O)–$;

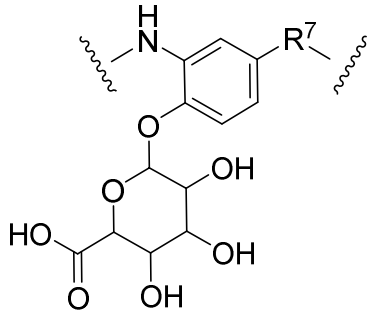
$Q–(CH_2)_m–C(=O)N(R^6)–PEG–C(=O)–PEP–$; and

$Q–(CH_2)_m–C(=O)N(R^6)–PEG–SS–(C_1\text{-}C_{12}$ alkyldiyl$)–OC(=O)–$;

R^6 is independently H or C_1-C_6 alkyl;

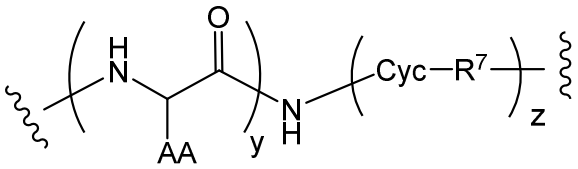
PEG has the formula: $–(CH_2CH_2O)_n–(CH_2)_m–$; m is an integer from 1 to 5, and n is an integer from 2 to 50;

Gluc has the formula:



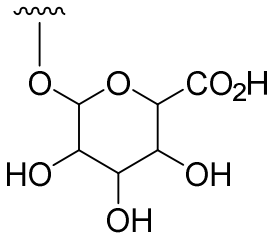
;

PEP has the formula:



where AA is independently selected from a natural or unnatural amino acid side chain, or one or more of AA, and an adjacent nitrogen atom form a 5-membered ring proline amino acid, and the wavy line indicates a point of attachment;

Cyc is selected from C_6-C_{20} aryldiyl and C_1-C_{20} heteroaryldiyl, optionally substituted with one or more groups selected from F, Cl, NO_2, –OH, $–OCH_3$, and a glucuronic acid having the structure:



;

R^7 is selected from the group consisting of $–CH(R^8)O–$, $–CH_2–$, $–CH_2N(R^8)–$, and $–CH(R^8)O–C(=O)–$, where R^8 is selected from H, C_1-C_6 alkyl, $C(=O)–C_1$-C_6 alkyl, and $–C(=O)N(R^9)_2$, where R^9 is independently selected from the group consisting of H, C_1-C_{12} alkyl, and $–(CH_2CH_2O)_n–(CH_2)_m–OH$, where m is an integer from 1 to 5, and n is an integer from 2 to 50, or two R^9 groups together form a 5- or 6-membered heterocyclyl ring;

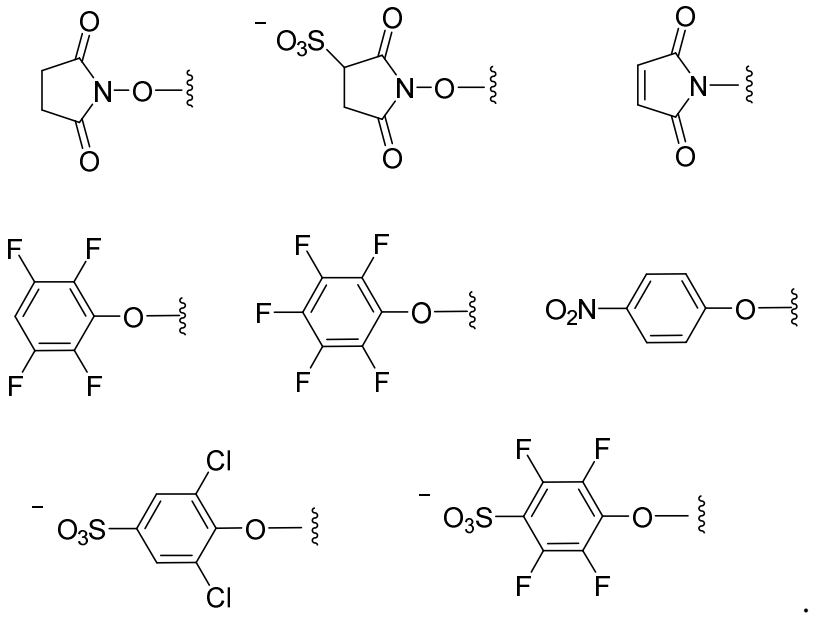
y is an integer from 2 to 12;

z is 0 or 1;

Q is selected from the group consisting of N-hydroxysuccinimidyl, N-hydroxysulfosuccinimidyl, maleimide, and phenoxy substituted with one or more groups independently selected from F, Cl, NO_2, and SO_3^-; and

alkyl, alkyldiyl, alkenyl, alkenyldiyl, alkynyl, alkynyldiyl, aryl, aryldiyl, carbocyclyl, carbocyclyldiyl, heterocyclyl, heterocyclyldiyl, heteroaryl, and heteroaryldiyl are independently and optionally substituted with one or more groups independently selected from F, Cl, Br, I, –CN, $–CH_3$, $–CH_2CH_3$, $–CH=CH_2$, $–C≡CH$, $–C≡CCH_3$, $–CH_2CH_2CH_3$, $–CH(CH_3)_2$, $–CH_2CH(CH_3)_2$, $–CH_2OH$, $–CH_2OCH_3$, $–CH_2CH_2OH$, $–C(CH_3)_2OH$, $–CH(OH)CH(CH_3)_2$, $–C(CH_3)_2CH_2OH$, $–CH_2CH_2SO_2CH_3$, $–CH_2OP(O)(OH)_2$, $–CH_2F$, $–CHF_2$, $–CF_3$, $–CH_2CF_3$, $–CH_2CHF_2$, $–CH(CH_3)CN$, $–C(CH_3)_2CN$, $–CH_2CN$, $–CH_2NH_2$, $–CH_2NHSO_2CH_3$, $–CH_2NHCH_3$, $–CH_2N(CH_3)_2$, $–CO_2H$, $–COCH_3$, $–CO_2CH_3$, $–CO_2C(CH_3)_3$, $–COCH(OH)CH_3$, $–CONH_2$, $–CONHCH_3$, $–CON(CH_3)_2$, $–C(CH_3)_2CONH_2$, $–NH_2$, $–NHCH_3$, $–N(CH_3)_2$, $–NHCOCH_3$, $–N(CH_3)COCH_3$, $–NHS(O)_2CH_3$, $–N(CH_3)C(CH_3)_2CONH_2$, $–N(CH_3)CH_2CH_2S(O)_2CH_3$, – NHC(=NH)H, $–NHC(=NH)CH_3$, $–NHC(=NH)NH_2$, $–NHC(=O)NH_2$, $–NO_2$, =O, –OH, $–OCH_3$, $–OCH_2CH_3$, $–OCH_2CH_2OCH_3$, $–OCH_2CH_2OH$, $–OCH_2CH_2N(CH_3)_2$, $–O(CH_2CH_2O)_n–(CH_2)_mCO_2H$, $–O(CH_2CH_2O)_nH$, $–OCH_2F$, $–OCHF_2$, $–OCF_3$, $–OP(O)(OH)_2$, $–S(O)_2N(CH_3)_2$, $–SCH_3$, $–S(O)_2CH_3$, and $–S(O)_3H$.

2. The 8-sulfonyl-2-amino-thienoazepine-linker compound of claim 1 wherein Q is selected from:



3. The 8-sulfonyl-2-amino-thienoazepine-linker compound of claim 2 wherein Q is maleimide.

4. The 8-sulfonyl-2-amino-thienoazepine-linker compound of claim 1 wherein L is selected from:

$Q–(CH_2)_m–C(=O)N(R^6)–PEG–$;

$Q–(CH_2)_m–C(=O)N(R^6)–PEG–C(=O)N(R^6)–(C_1\text{-}C_{12}$ alkyldiyl)–C(=O)–Gluc–;

$Q–(CH_2)_m–C(=O)N(R^6)–PEG–O–$;

$Q–(CH_2)_m–C(=O)N(R^6)–PEG–O–C(=O)–$;

$Q–(CH_2)_m–C(=O)N(R^6)–PEG–C(=O)–$;

$Q–(CH_2)_m–C(=O)N(R^6)–PEG–N(R^5)–$;

$Q–(CH_2)_m–C(=O)N(R^6)–PEG–N(PEG–CO_2H)–PEG–N(R^5)–$;

$Q–(CH_2)_m–C(=O)N(R^6)–PEG–C(=O)N(PEG–CO_2H)–PEG–N(R^5)–$;

$Q–(CH_2)_m–C(=O)N(R^6)–PEG–N(R^5)–C(=O)–$;

$Q–(CH_2)_m–C(=O)N(R^6)–PEG–N(PEG–CO_2H)–PEG–C(=O)–$;

$Q–(CH_2)_m–C(=O)N(R^6)–PEG–C(=O)N(PEG–CO_2H)–PEG–C(=O)–$;

$Q–(CH_2)_m–C(=O)N(R^6)–PEG–C(=O)–PEP–$; and

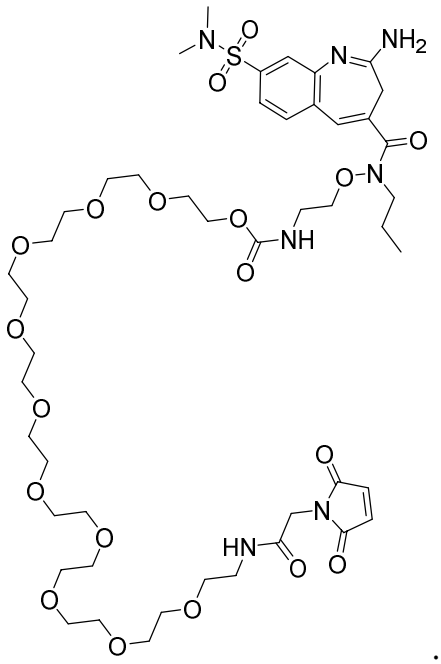
$Q–(CH_2)_m–C(=O)N(R^6)–PEG–SS–(C_1\text{-}C_{12}$ alkyldiyl)–OC(=O)–;

and Q is maleimide.

5. The 8-sulfonyl-2-amino-thienoazepine-linker compound of claim 4 wherein L is:

$Q–(CH_2)_m–C(=O)N(R^6)–PEG–O–C(=O)–$.

6. The 8-sulfonyl-2-amino-thienoazepine-linker compound of claim 1 having the structure:



.

7. An immunoconjugate comprising an antibody covalently attached to one or more 8-sulfonyl-2-aminobenzazepine moieties by a linker, and having Formula I:

$$Ab–[L–D]_p \qquad \text{I}$$

or a pharmaceutically acceptable salt thereof,

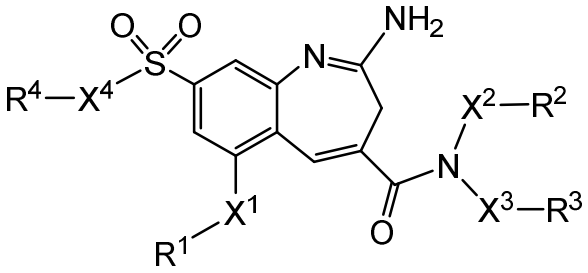
wherein:

Ab is the antibody,

p is an integer from 1 to 8;

L is the linker;

D is the 8-sulfonyl-2-aminobenzazepine moiety having the formula:



R^1, R^2, R^3, and R^4 are independently selected from the group consisting of H, C_1-C_{12} alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_3-C_{12} carbocyclyl, C_6-C_{20} aryl, C_2-C_9 heterocyclyl, and C_1-C_{20} heteroaryl, each of which are independently and optionally substituted with one or more groups selected from:

–(C_1-C_{12} alkyldiyl)–N(R^5)–*;

–(C_1-C_{12} alkyldiyl)–N(R^5)$_2$;

–(C_1-C_{12} alkyldiyl)–OR^5;

–(C_3-C_{12} carbocyclyl);

–(C_3-C_{12} carbocyclyl)–*;

–(C_3-C_{12} carbocyclyl)–(C_1-C_{12} alkyldiyl)–NR^5–*;

–(C_3-C_{12} carbocyclyl)–(C_1-C_{12} alkyldiyl)–N(R^5)$_2$;

–(C_3-C_{12} carbocyclyl)–NR^5–C(=NR^5)NR^5–*;

–(C_6-C_{20} aryl);

–(C_6-C_{20} aryldiyl)–*;

–(C_6-C_{20} aryldiyl)–N(R^5)–*;

–(C_6-C_{20} aryldiyl)–(C_1-C_{12} alkyldiyl)–N(R^5)–*;

–(C_6-C_{20} aryldiyl)–(C_1-C_{12} alkyldiyl)–(C_2-C_{20} heterocyclyldiyl)–*;

–(C_6-C_{20} aryldiyl)–(C_1-C_{12} alkyldiyl)–N(R^5)$_2$;

–(C_6-C_{20} aryldiyl)–(C_1-C_{12} alkyldiyl)–NR^5–C(=NR^{5a})N(R^5)–*;

–(C_2-C_{20} heterocyclyl);

–(C_2-C_{20} heterocyclyl)–*;

–(C_2-C_9 heterocyclyl)–(C_1-C_{12} alkyldiyl)–NR^5–*;

–(C_2-C_9 heterocyclyl)–(C_1-C_{12} alkyldiyl)–N(R^5)$_2$;

–(C_2-C_9 heterocyclyl)–C(=O)–(C_1-C_{12} alkyldiyl)–N(R^5)–*;

–(C_2-C_9 heterocyclyl)–NR^5–C(=NR^{5a})NR^5–*;

–(C_2-C_9 heterocyclyl)–NR^5–(C_6-C_{20} aryldiyl)–(C_1-C_{12} alkyldiyl)–$N(R^5)$–*;

–(C_2-C_9 heterocyclyl)–(C_6-C_{20} aryldiyl)–*;

–(C_1-C_{20} heteroaryl);

–(C_1-C_{20} heteroaryl)–*;

–(C_1-C_{20} heteroaryl)–(C_1-C_{12} alkyldiyl)–$N(R^5)$–*;

–(C_1-C_{20} heteroaryl)–(C_1-C_{12} alkyldiyl)–$N(R^5)_2$;

–(C_1-C_{20} heteroaryl)–NR^5–$C(=NR^{5a})N(R^5)$–*;

–(C_1-C_{20} heteroaryl)–$N(R^5)C(=O)$–(C_1-C_{12} alkyldiyl)–$N(R^5)$–*;

–C(=O)–*;

–C(=O)–(C_1-C_{12} alkyldiyl)–$N(R^5)$–*;

–C(=O)–(C_2-C_{20} heterocyclyldiyl)–*;

–$C(=O)N(R^5)_2$;

–$C(=O)N(R^5)$–*;

–$C(=O)N(R^5)$–(C_1-C_{12} alkyldiyl)–$N(R^5)C(=O)R^5$;

–$C(=O)N(R^5)$–(C_1-C_{12} alkyldiyl)–$N(R^5)C(=O)N(R^5)_2$;

–$C(=O)NR^5$–(C_1-C_{12} alkyldiyl)–$N(R^5)CO_2R^5$;

–$C(=O)NR^5$–(C_1-C_{12} alkyldiyl)–$N(R^5)C(=NR^{5a})N(R^5)_2$;

–$C(=O)NR^5$–(C_1-C_{12} alkyldiyl)–$NR^5C(=NR^{5a})R^5$;

–$C(=O)NR^5$–(C_1-C_8 alkyldiyl)–NR^5(C_2-C_5 heteroaryl);

–$C(=O)NR^5$–(C_1-C_{20} heteroaryldiyl)–$N(R^5)$–*;

–$C(=O)NR^5$–(C_1-C_{20} heteroaryldiyl)–*;

–$C(=O)NR^5$–(C_1-C_{20} heteroaryldiyl)–(C_1-C_{12} alkyldiyl)–$N(R^5)_2$;

–$C(=O)NR^5$–(C_1-C_{20} heteroaryldiyl)–(C_2-C_{20} heterocyclyldiyl)–$C(=O)NR^5$–(C_1-C_{12} alkyldiyl)–NR^5–*;

–$N(R^5)_2$;

–$N(R^5)$–*;

–$N(R^5)C(=O)R^5$;

–$N(R^5)C(=O)$–*;

–$N(R^5)C(=O)N(R^5)_2$;

–$N(R^5)C(=O)N(R^5)$–*;

–$N(R^5)CO_2R^5$;

–$NR^5C(=NR^{5a})N(R^5)_2$;

–$NR^5C(=NR^{5a})N(R^5)$–*;

–$NR^5C(=NR^{5a})R^5$;

–$N(R^5)C(=O)$–(C_1-C_{12} alkyldiyl)–$N(R^5)$–*;

–$N(R^5)$–(C_2-C_5 heteroaryl);

–$N(R^5)$–$S(=O)_2$–(C_1-C_{12} alkyl);

–O–(C_1-C_{12} alkyl);

–O–(C_1-C_{12} alkyldiyl)–$N(R^5)_2$;

–O–(C_1-C_{12} alkyldiyl)–$N(R^5)$–*;

–O–$C(=O)N(R^5)_2$;

–O–$C(=O)N(R^5)$–*;

–O–(R^5)–*;

–OR^5;

–$S(=O)_2$–(C_2-C_{20} heterocyclyldiyl)–*;

–$S(=O)_2$–(C_2-C_{20} heterocyclyldiyl)–(C_1-C_{12} alkyldiyl)–$N(R^5)_2$;

–$S(=O)_2$–(C_2-C_{20} heterocyclyldiyl)–(C_1-C_{12} alkyldiyl)–NR^5–*; and

–$S(=O)_2$–(C_2-C_{20} heterocyclyldiyl)–(C_1-C_{12} alkyldiyl)–OH;

or R^2 and R^3 together form a 5- or 6-membered heterocyclyl ring;

X^1, X^2, X^3 and X^4 are independently selected from the group consisting of a bond, C(=O), $C(=O)N(R^5)$, O, $N(R^5)$, S, $S(O)_2$, and $S(O)_2N(R^5)$;

R^5 is independently selected from the group consisting of H, C_6-C_{20} aryl, C_3-C_{12} carbocyclyl, C_6-C_{20} aryldiyl, C_1-C_{12} alkyl, and C_1-C_{12} alkyldiyl, or two R^5 groups together form a 5- or 6-membered heterocyclyl ring;

R^{5a} is selected from the group consisting of C_6-C_{20} aryl and C_1-C_{20} heteroaryl;

where the asterisk * indicates the attachment site of L, and where one of R^1, R^2, R^3 and R^4 is attached to L;

L is the linker selected from the group consisting of:

–C(=O)–PEG–;

–C(=O)–PEG–C(=O)N(R^6)–(C_1-C_{12} alkyldiyl)–C(=O)–Gluc–;

–C(=O)–PEG–O–;

–C(=O)–PEG–O–C(=O)–;

–C(=O)–PEG–C(=O)–;

–C(=O)–PEG–C(=O)–PEP–;

–C(=O)–PEG–N(R^6)–;

–C(=O)–PEG–N(R^6)–C(=O)–;

–C(=O)–PEG–N(R^6)–PEG–C(=O)–PEP–;

–C(=O)–PEG–N^+(R^6)$_2$–PEG–C(=O)–PEP–;

–C(=O)–PEG–C(=O)–PEP–N(R^6)–(C_1-C_{12} alkyldiyl)–;

–C(=O)–PEG–C(=O)–PEP–N(R^6)–(C_1-C_{12} alkyldiyl)N(R^6)C(=O)–(C_2-C_5 monoheterocyclyldiyl)–;

–C(=O)–PEG–SS–(C_1-C_{12} alkyldiyl)–OC(=O)–;

–C(=O)–PEG–SS–(C_1-C_{12} alkyldiyl)–C(=O)–;

–succinimidyl–(CH_2)$_m$–C(=O)N(R^6)–PEG–;

–succinimidyl–(CH_2)$_m$–C(=O)N(R^6)–PEG–C(=O)N(R^6)–(C_1-C_{12} alkyldiyl)–C(=O)–Gluc–;

–succinimidyl–(CH_2)$_m$–C(=O)N(R^6)–PEG–O–;

–succinimidyl–(CH_2)$_m$–C(=O)N(R^6)–PEG–O–C(=O)–;

–succinimidyl–(CH_2)$_m$–C(=O)N(R^6)–PEG–C(=O)–;

–succinimidyl–(CH_2)$_m$–C(=O)N(R^6)–PEG–N(R^5)–;

–succinimidyl–(CH_2)$_m$–C(=O)N(R^6)–PEG–N(PEG–CO_2H)–PEG–N(R^5)–;

–succinimidyl–(CH_2)$_m$–C(=O)N(R^6)–PEG–C(=O)N(PEG–CO_2H)–PEG–N(R^5)–;

–succinimidyl–(CH_2)$_m$–C(=O)N(R^6)–PEG–N(R^5)–C(=O)–;

–succinimidyl–(CH_2)$_m$–C(=O)N(R^6)–PEG–N(PEG–CO_2H)–PEG–C(=O)–;

–succinimidyl–(CH_2)$_m$–C(=O)N(R^6)–PEG–C(=O)N(PEG–CO_2H)–PEG–C(=O)–;

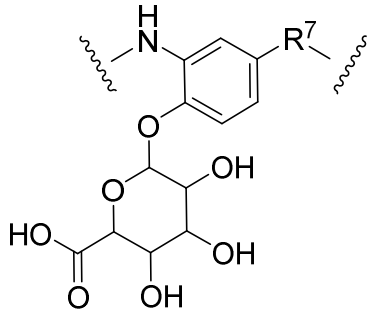
–succinimidyl–(CH_2)$_m$–C(=O)N(R^6)–PEG–C(=O)–PEP–; and

–succinimidyl–$(CH_2)_m$–C(=O)N(R^6)–PEG–SS–(C_1-C_{12} alkyldiyl)–OC(=O)–;

R^6 is independently H or C_1-C_6 alkyl;

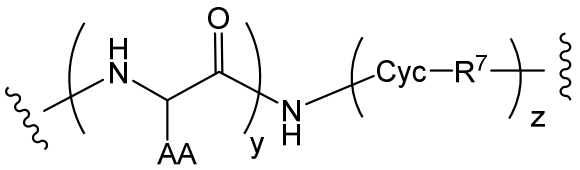
PEG has the formula: –$(CH_2CH_2O)_n$–$(CH_2)_m$–; m is an integer from 1 to 5, and n is an integer from 2 to 50;

Gluc has the formula:



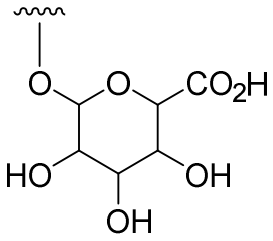
;

PEP has the formula:



where AA is independently selected from a natural or unnatural amino acid side chain, or one or more of AA, and an adjacent nitrogen atom form a 5-membered ring proline amino acid, and the wavy line indicates a point of attachment;

Cyc is selected from C_6-C_{20} aryldiyl and C_1-C_{20} heteroaryldiyl, optionally substituted with one or more groups selected from F, Cl, NO_2, –OH, $–OCH_3$, and a glucuronic acid having the structure:



;

R^7 is selected from the group consisting of –CH(R^8)O–, $–CH_2–$, $–CH_2N(R^8)–$, and –CH(R^8)O–C(=O)–, where R^8 is selected from H, C_1-C_6 alkyl, C(=O)–C_1-C_6 alkyl, and –C(=O)N(R^9)$_2$, where R^9 is independently selected from the group consisting of H, C_1-C_{12} alkyl, and –$(CH_2CH_2O)_n$–$(CH_2)_m$–OH, where m is an integer from 1 to 5, and n is

an integer from 2 to 50, or two R^9 groups together form a 5- or 6-membered heterocyclyl ring;

y is an integer from 2 to 12;

z is 0 or 1; and

alkyl, alkyldiyl, alkenyl, alkenyldiyl, alkynyl, alkynyldiyl, aryl, aryldiyl, carbocyclyl, carbocyclyldiyl, heterocyclyl, heterocyclyldiyl, heteroaryl, and heteroaryldiyl are independently and optionally substituted with one or more groups independently selected from F, Cl, Br, I, –CN, $–CH_3$, $–CH_2CH_3$, $–CH=CH_2$, $–C≡CH$, $–C≡CCH_3$, $–CH_2CH_2CH_3$, $–CH(CH_3)_2$, $–CH_2CH(CH_3)_2$, $–CH_2OH$, $–CH_2OCH_3$, $–CH_2CH_2OH$, $–C(CH_3)_2OH$, $–CH(OH)CH(CH_3)_2$, $–C(CH_3)_2CH_2OH$, $–CH_2CH_2SO_2CH_3$, $–CH_2OP(O)(OH)_2$, $–CH_2F$, $–CHF_2$, $–CF_3$, $–CH_2CF_3$, $–CH_2CHF_2$, $–CH(CH_3)CN$, $–C(CH_3)_2CN$, $–CH_2CN$, $–CH_2NH_2$, $–CH_2NHSO_2CH_3$, $–CH_2NHCH_3$, $–CH_2N(CH_3)_2$, $–CO_2H$, $–COCH_3$, $–CO_2CH_3$, $–CO_2C(CH_3)_3$, $–COCH(OH)CH_3$, $–CONH_2$, $–CONHCH_3$, $–CON(CH_3)_2$, $–C(CH_3)_2CONH_2$, $–NH_2$, $–NHCH_3$, $–N(CH_3)_2$, $–NHCOCH_3$, $–N(CH_3)COCH_3$, $–NHS(O)_2CH_3$, $–N(CH_3)C(CH_3)_2CONH_2$, $–N(CH_3)CH_2CH_2S(O)_2CH_3$, – NHC(=NH)H, $–NHC(=NH)CH_3$, $–NHC(=NH)NH_2$, $–NHC(=O)NH_2$, $–NO_2$, =O, –OH, $–OCH_3$, $–OCH_2CH_3$, $–OCH_2CH_2OCH_3$, $–OCH_2CH_2OH$, $–OCH_2CH_2N(CH_3)_2$, $–O(CH_2CH_2O)_n–(CH_2)_mCO_2H$, $–O(CH_2CH_2O)_nH$, $–OCH_2F$, $–OCHF_2$, $–OCF_3$, $–OP(O)(OH)_2$, $–S(O)_2N(CH_3)_2$, $–SCH_3$, $–S(O)_2CH_3$, and $–S(O)_3H$.

8. The immunoconjugate of claim 7 wherein X^1 is a bond, and R^1 is H.

9. The immunoconjugate of claim 7 wherein X^2 is a bond, and R^2 is C_1-C_8 alkyl.

10. The immunoconjugate of claim 7 wherein X^2 and X^3 are each a bond, and R^2 and R^3 are independently selected from C_1-C_8 alkyl, $–O–(C_1$-C_{12} alkyl), $–(C_1$-C_{12} alkyldiyl)$–OR^5$, $–(C_1$-C_8 alkyldiyl)$–N(R^5)CO_2R^5$, $–(C_1$-C_{12} alkyl)$–OC(O)N(R^5)_2$, $–O–(C_1$-C_{12} alkyl)$–N(R^5)CO_2R^5$, and $–O–(C_1$-C_{12} alkyl)$–OC(O)N(R^5)_2$.

11. The immunoconjugate of claim 10 wherein R^2 and R^3 are each independently selected from $–CH_2CH_2CH_3$, $–OCH_2CH_3$, $–OCH_2CF_3$, $–CH_2CH_2CF_3$, $–OCH_2CH_2OH$, and $–CH_2CH_2CH_2OH$.

12. The immunoconjugate of claim 7 wherein R^4 is C_1-C_{12} alkyl.

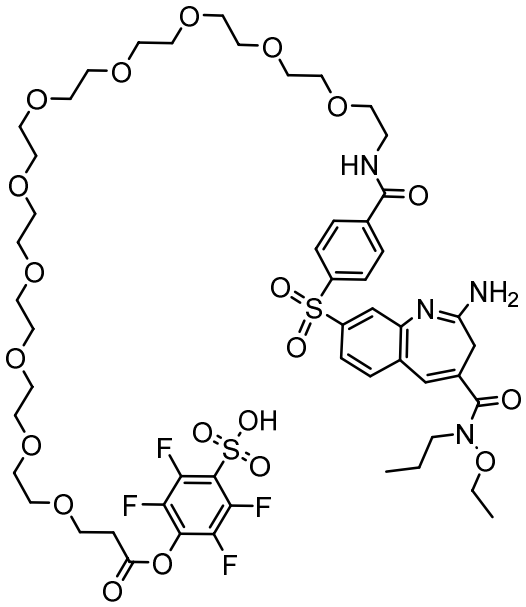
13. The immunoconjugate of claim 7 wherein R^4 is –(C_1-C_{12} alkyldiyl)–$N(R^5)$–*; where the asterisk * indicates the attachment site of L.

14. The immunoconjugate of claim 7 wherein L is attached to a cysteine thiol of the antibody.

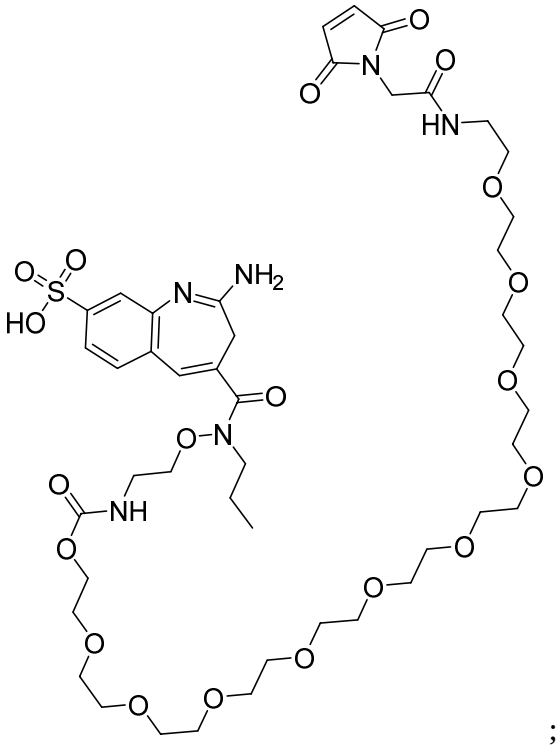
15. The immunoconjugate of claim 7 wherein for the PEG, m is 1 or 2, and n is an integer from 2 to 10.

16. The immunoconjugate of claim 15 wherein n is 10.

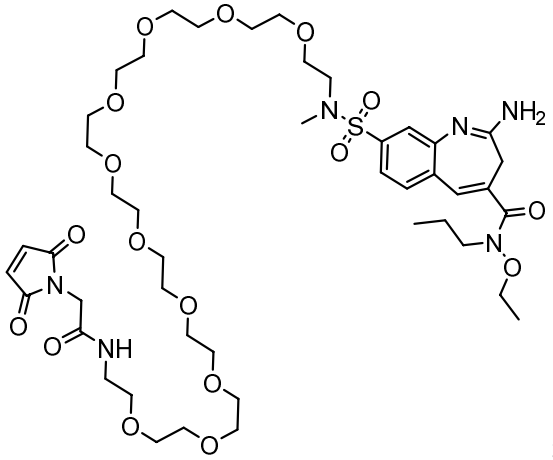
17. The 8-sulfonyl-2-aminobenzazepine-linker compound selected from the group consisting of:



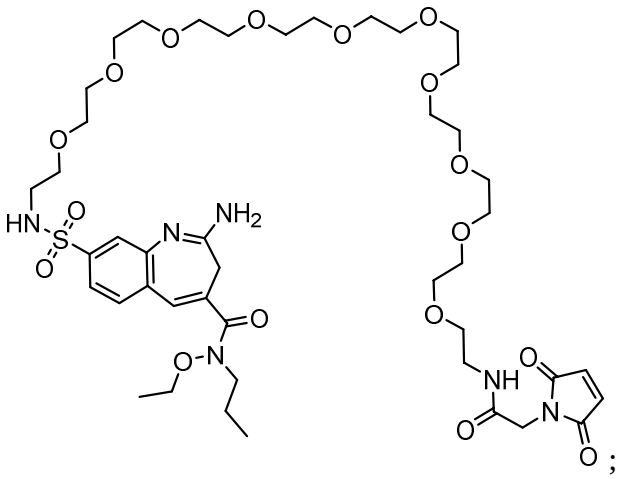
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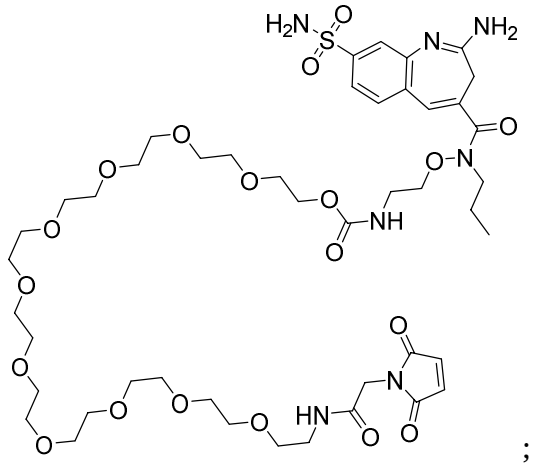
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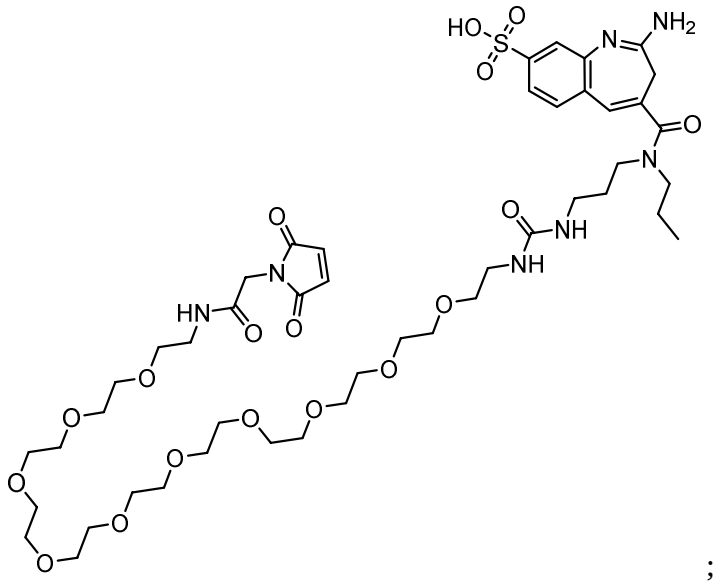


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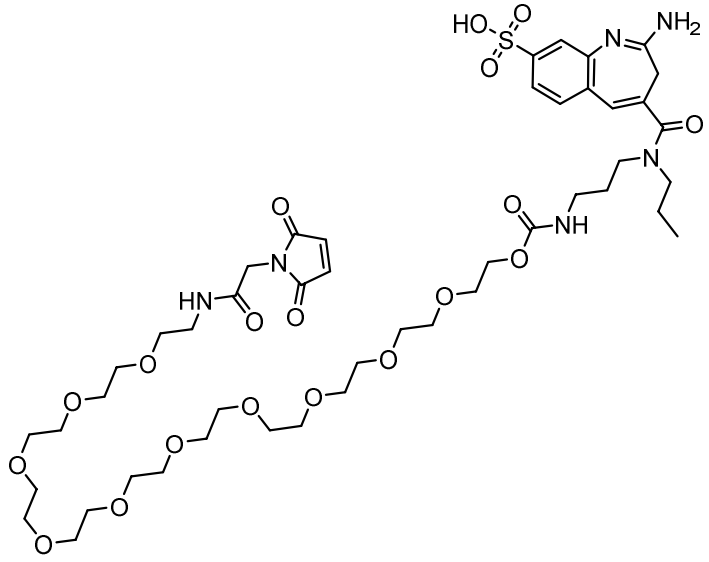


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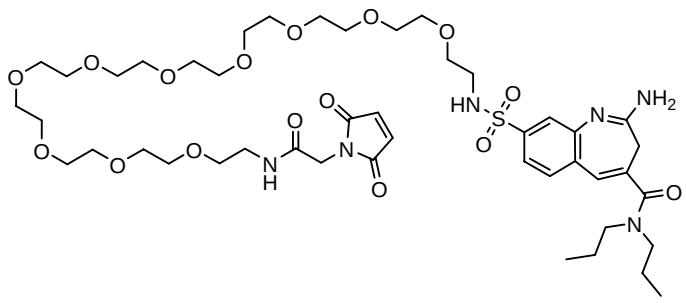

H2N
O
S
O
N
NH2
O
O
O



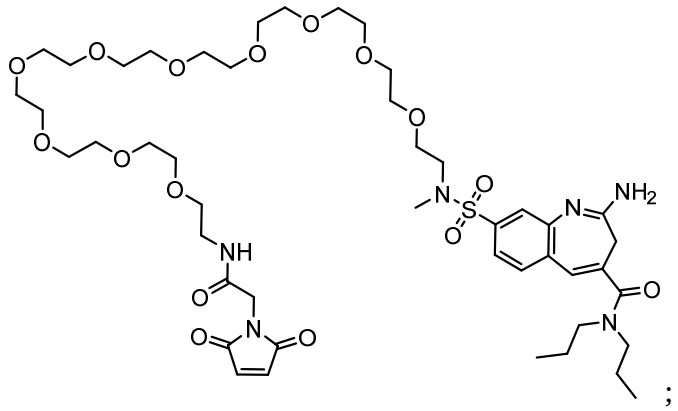
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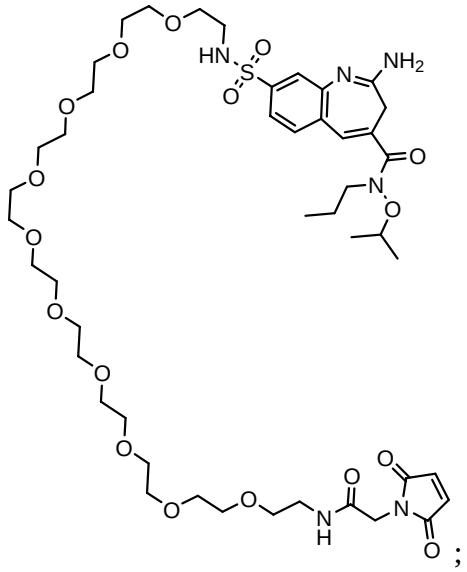


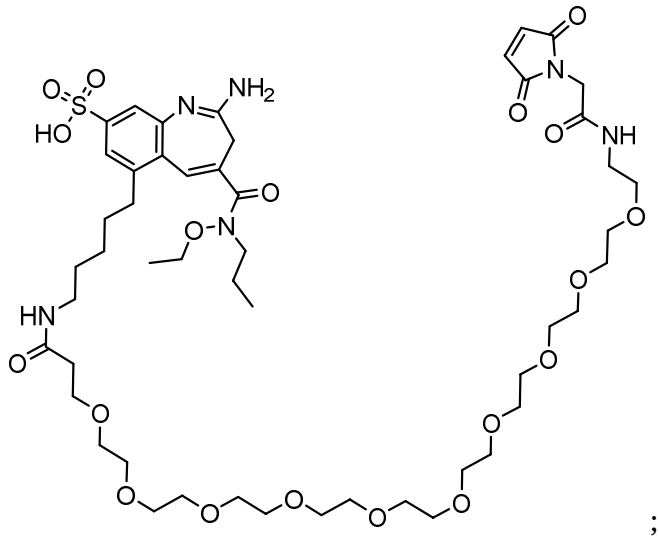
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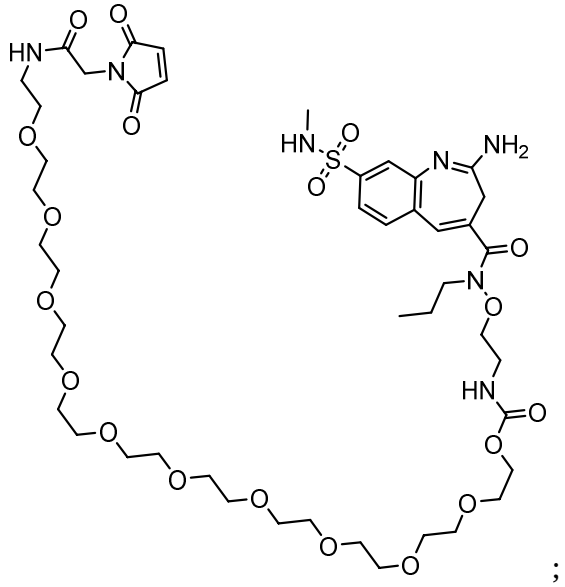


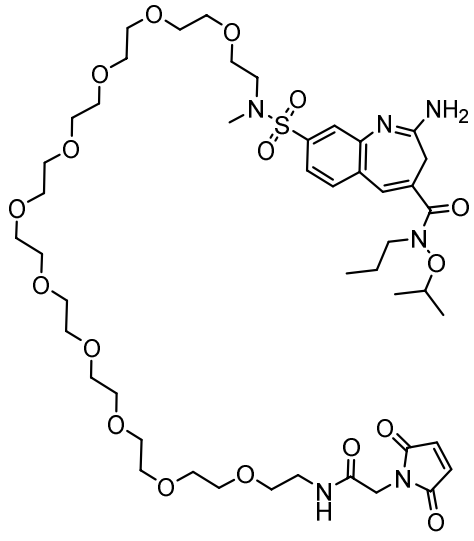
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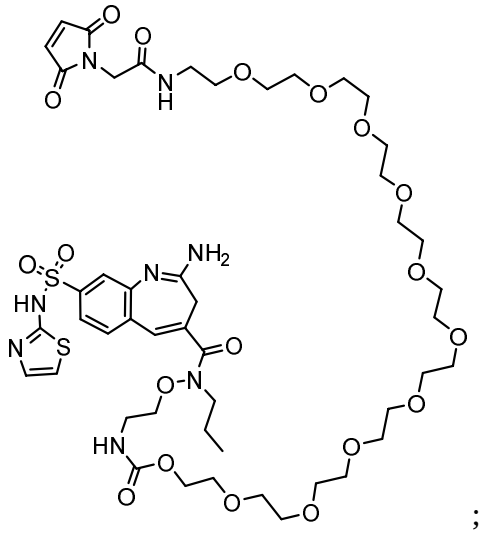

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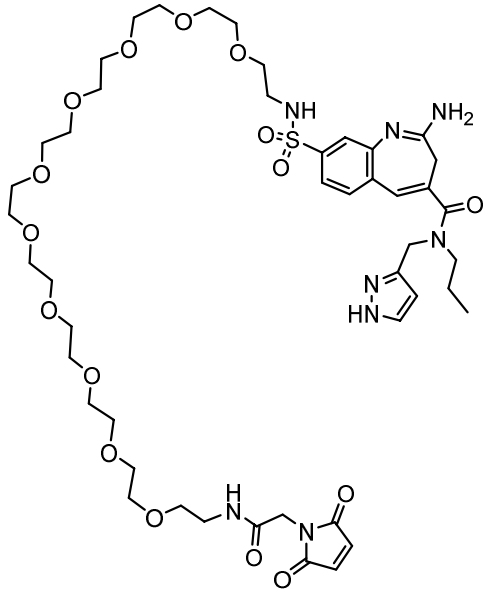

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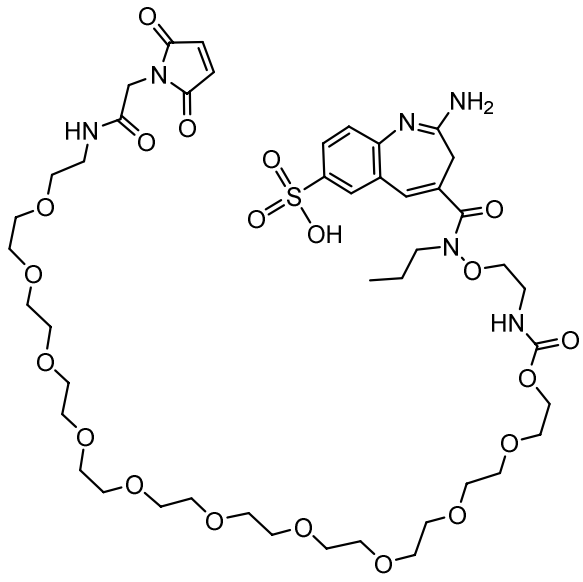

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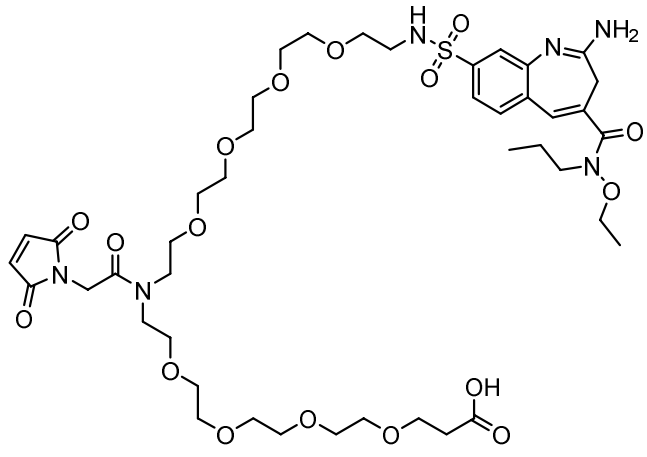

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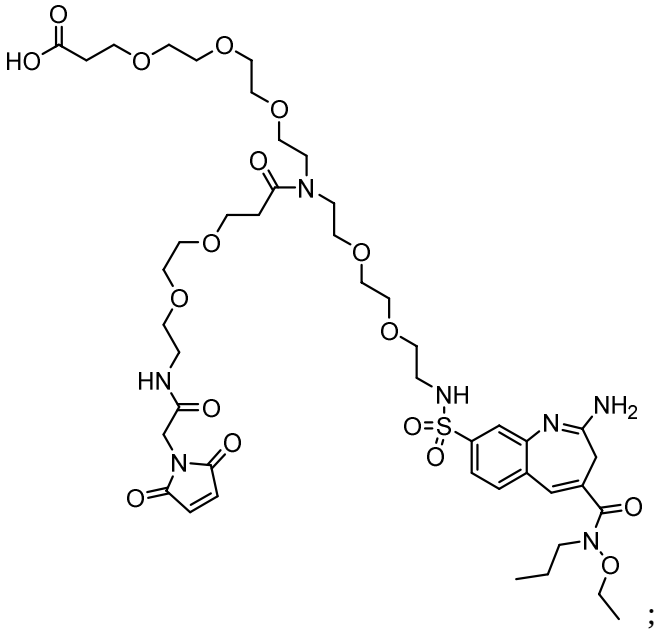
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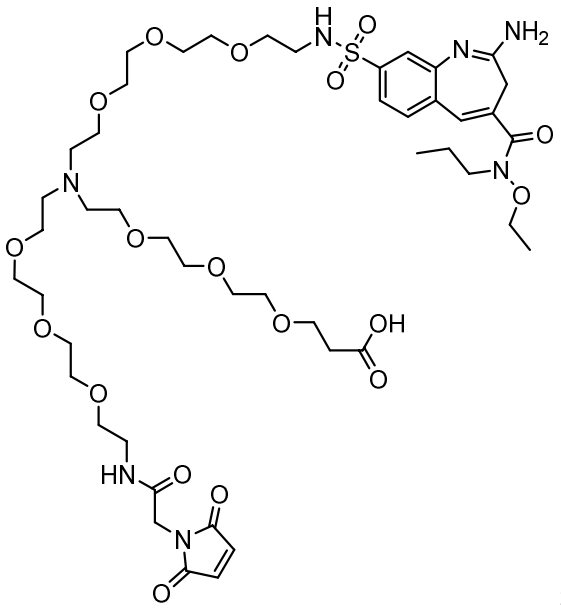
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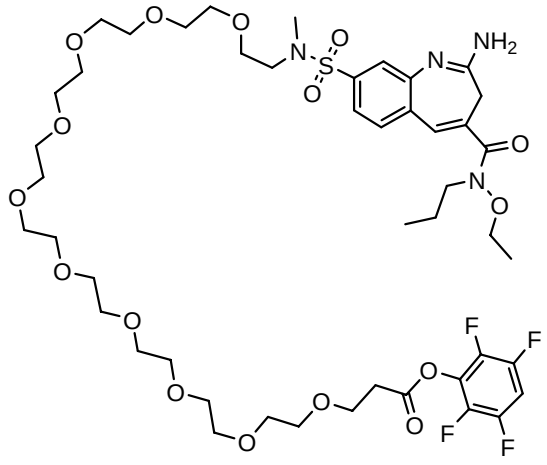
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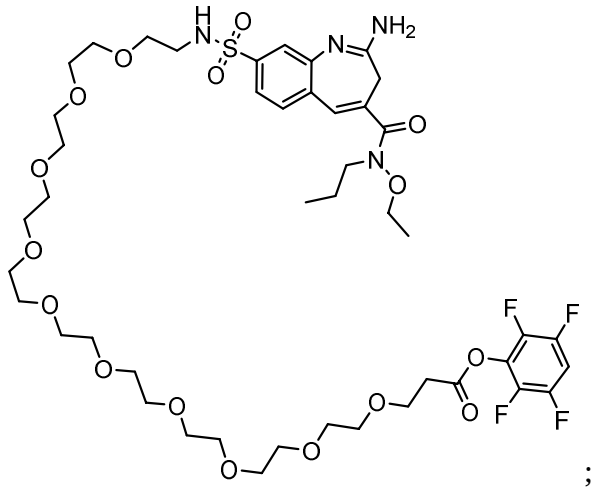


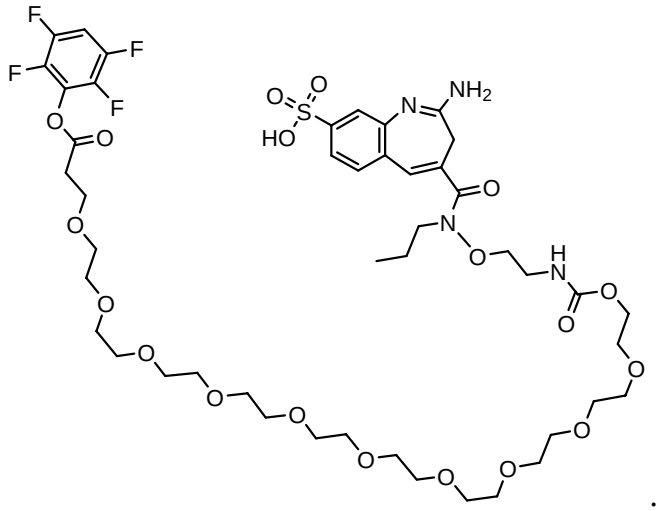
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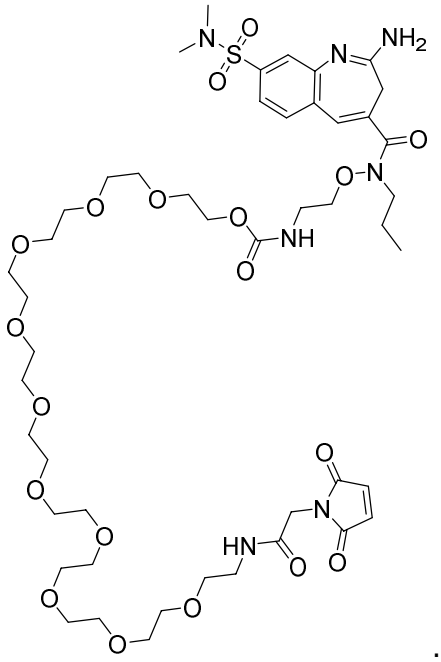

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18. A pharmaceutical composition comprising a therapeutically effective amount of an immunoconjugate of claim 7, and one or more pharmaceutically acceptable diluent, vehicle, carrier or excipient.

19. Use of an immunoconjugate according to claim 7 in the manufacture of a medicament for treating cancer, wherein the cancer is selected from cervical cancer, endometrial cancer, ovarian cancer, prostate cancer, pancreatic cancer, esophageal cancer, bladder cancer, urinary tract cancer, urothelial carcinoma, lung cancer, non-small cell lung cancer, Merkel cell carcinoma, colon cancer, colorectal cancer, gastric cancer, and breast cancer.

20. A method of preparing an immunoconjugate of Formula I of claim 7 wherein the 8-sulfonyl-2-amino-thienoazepine-linker compound of claim 1 is conjugated with the antibody.

21. The method of claim 20 wherein the 8-sulfonyl-2-amino-thienoazepine-linker compound is:



.

22. The immunoconjugate of claim 7 wherein the antibody binds to a target selected from the group consisting of PD-L1, HER2, TROP2, and CEA.

23. The immunoconjugate of claim 22 wherein the antibody is selected from the group consisting of trastuzumab, pertuzumab, labetuzumab, and sacituzumab.

24. The immunoconjugate of claim 7 wherein L is selected from:

–succinimidyl–$(CH_2)_m$–C(=O)N(R^6)–PEG–;

–succinimidyl–$(CH_2)_m$–C(=O)N(R^6)–PEG–C(=O)N(R^6)–(C_1-C_{12} alkyldiyl)–C(=O)–Gluc–;

–succinimidyl–$(CH_2)_m$–C(=O)N(R^6)–PEG–O–;

–succinimidyl–$(CH_2)_m$–C(=O)N(R^6)–PEG–O–C(=O)–;

–succinimidyl–$(CH_2)_m$–C(=O)N(R^6)–PEG–C(=O)–;

–succinimidyl–$(CH_2)_m$–C(=O)N(R^6)–PEG–N(R^5)–;

–succinimidyl–$(CH_2)_m$–C(=O)N(R^6)–PEG–N(PEG–CO_2H)–PEG–N(R^5)–;

–succinimidyl–$(CH_2)_m$–C(=O)N(R^6)–PEG–C(=O)N(PEG–CO_2H)–PEG–N(R^5)–;

–succinimidyl–$(CH_2)_m$–C(=O)N(R^6)–PEG–N(R^5)–C(=O)–;

–succinimidyl–$(CH_2)_m$–C(=O)N(R^6)–PEG–N(PEG–CO_2H)–PEG–C(=O)–;

–succinimidyl–$(CH_2)_m$–C(=O)N(R^6)–PEG–C(=O)N(PEG–CO_2H)–PEG–C(=O)–;

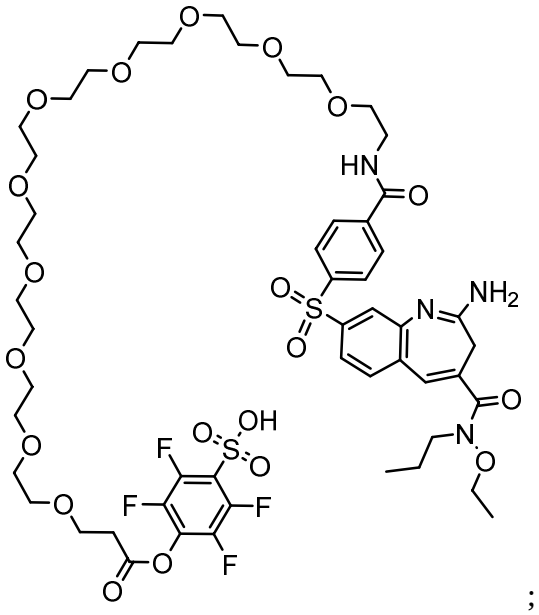
–succinimidyl–$(CH_2)_m$–C(=O)N(R^6)–PEG–C(=O)–PEP–; and

–succinimidyl–$(CH_2)_m$–C(=O)N(R^6)–PEG–SS–(C_1-C_{12} alkyldiyl)–OC(=O)–.

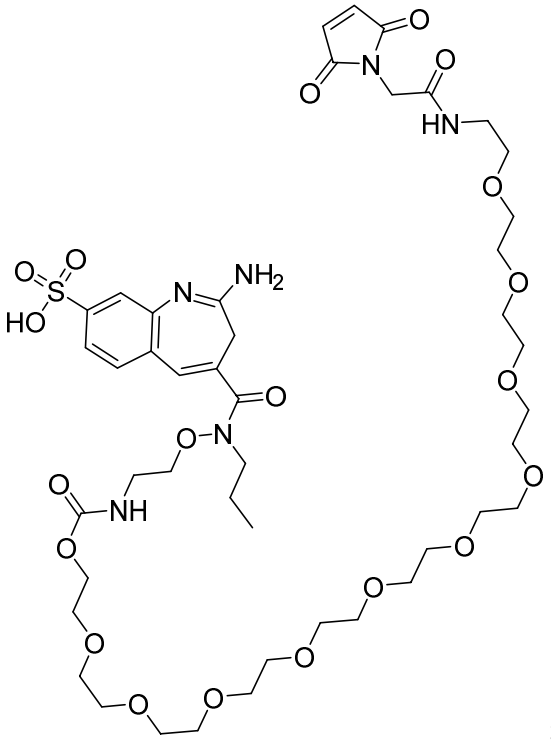
25. The immunoconjugate of claim 24 wherein L is:

–succinimidyl–$(CH_2)_m$–C(=O)N(R^6)–PEG–O–C(=O)–.

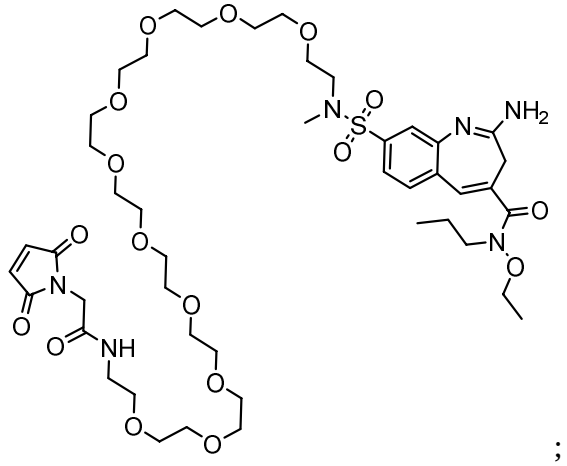
26. The immunoconjugate of claim 7 prepared by conjugation of an antibody with an 8-sulfonyl-2-aminobenzazepine-linker compound selected from the group consisting of:



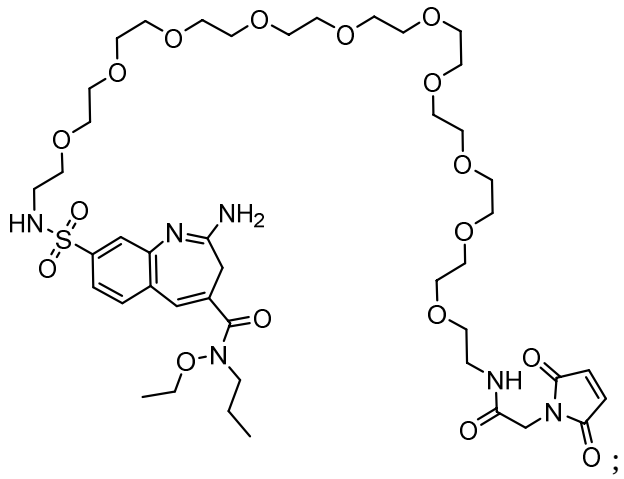
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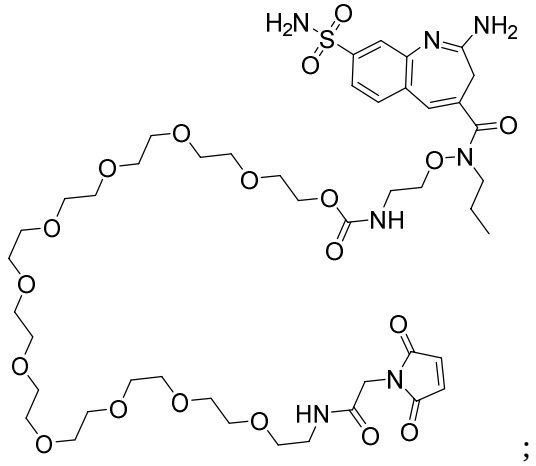
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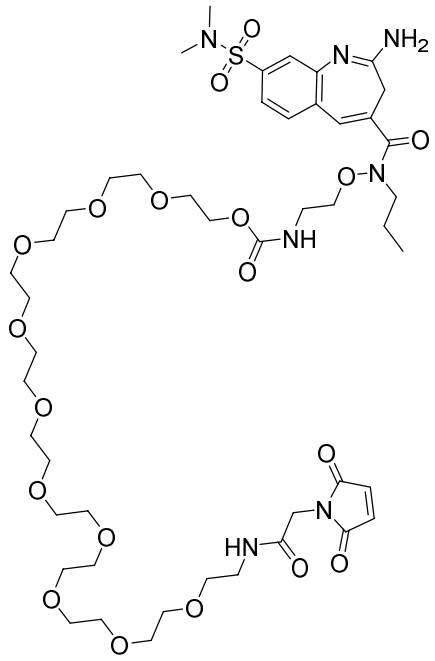
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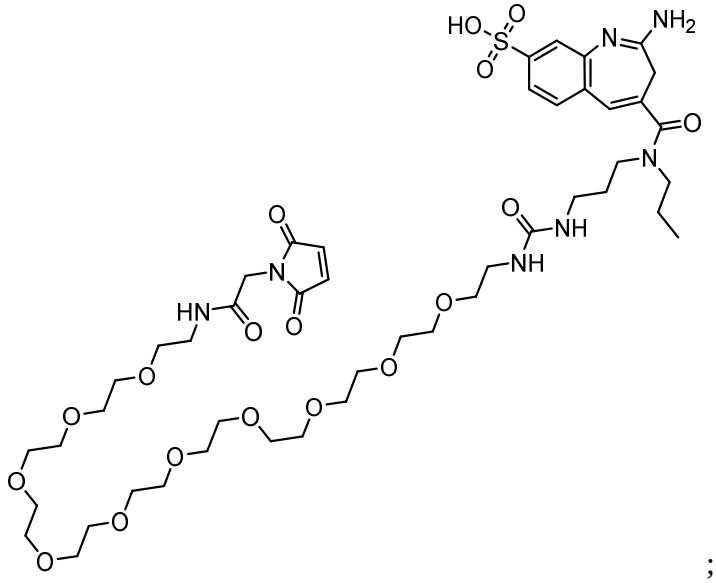
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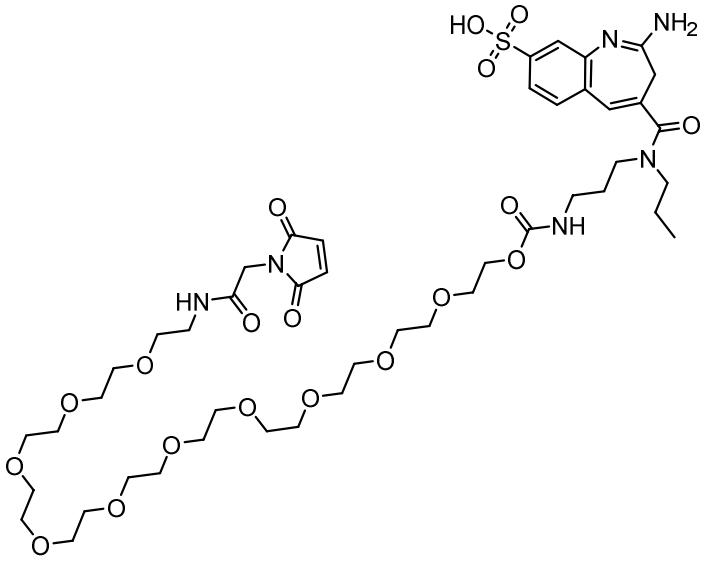
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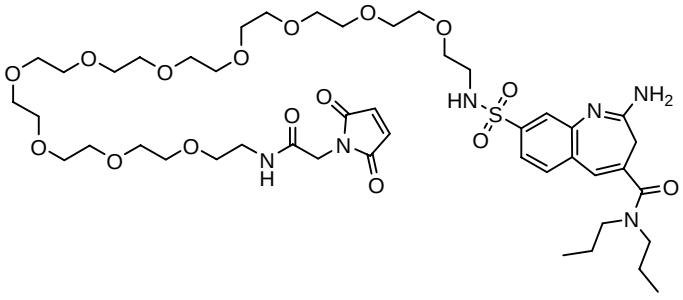
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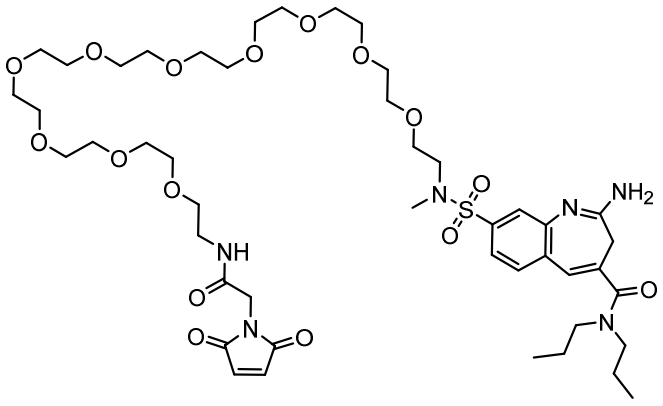
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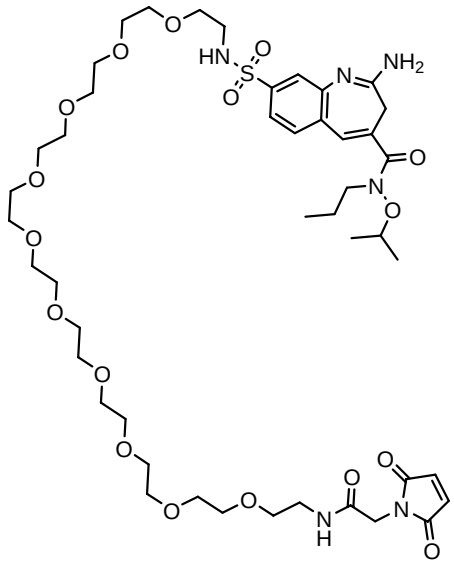
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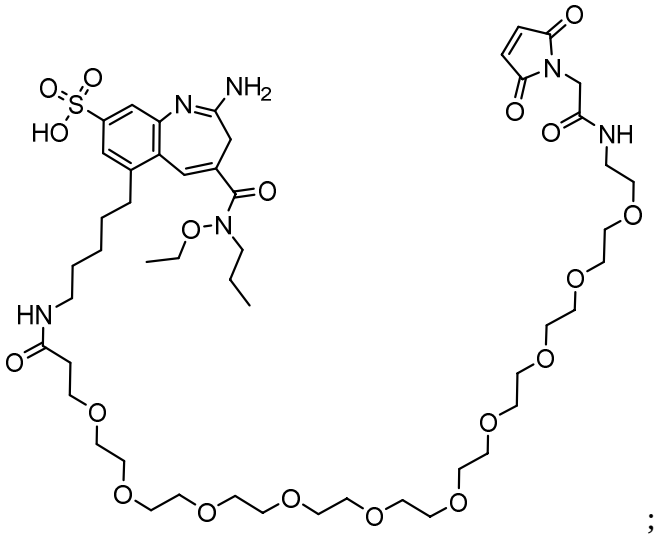


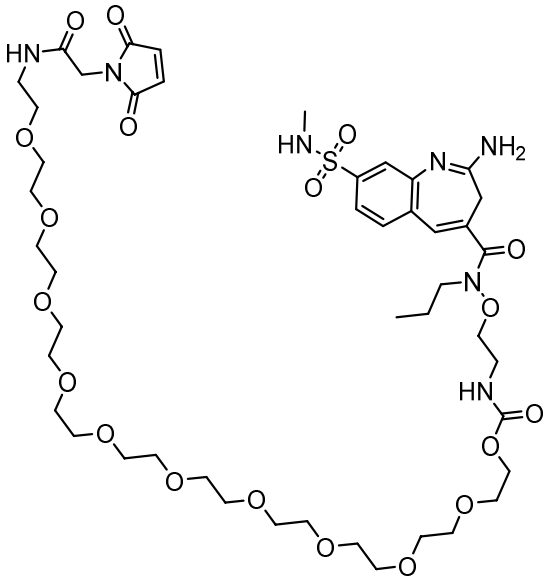
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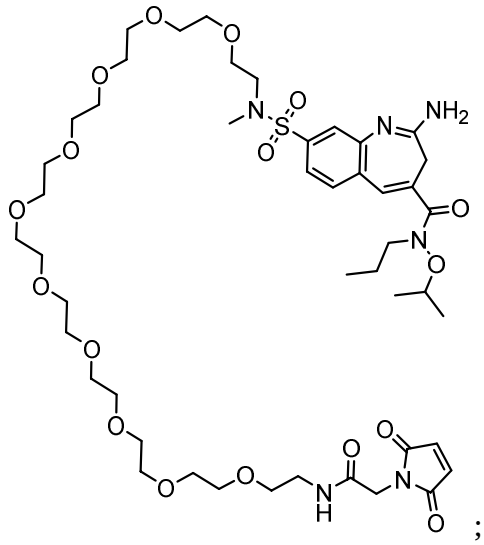


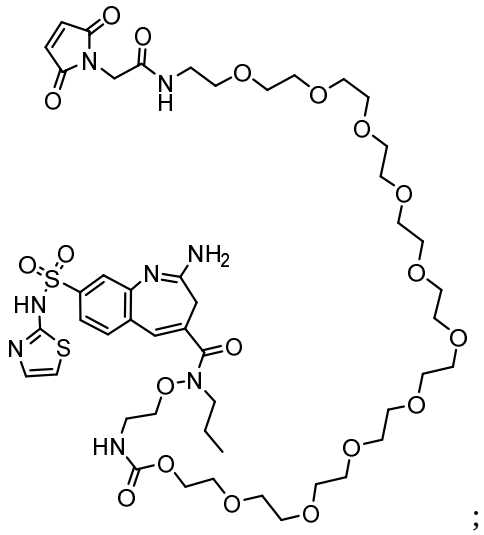
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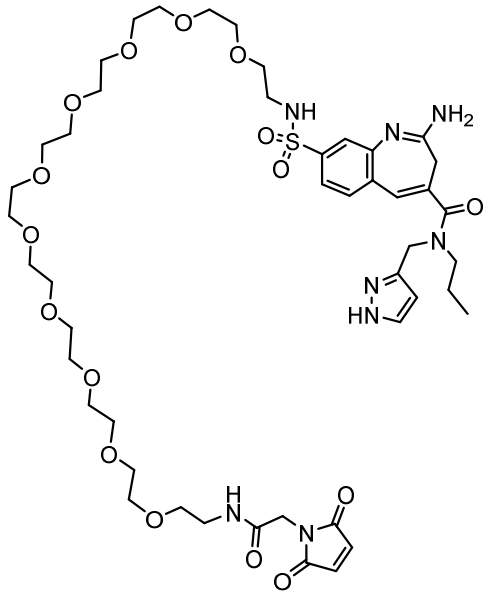

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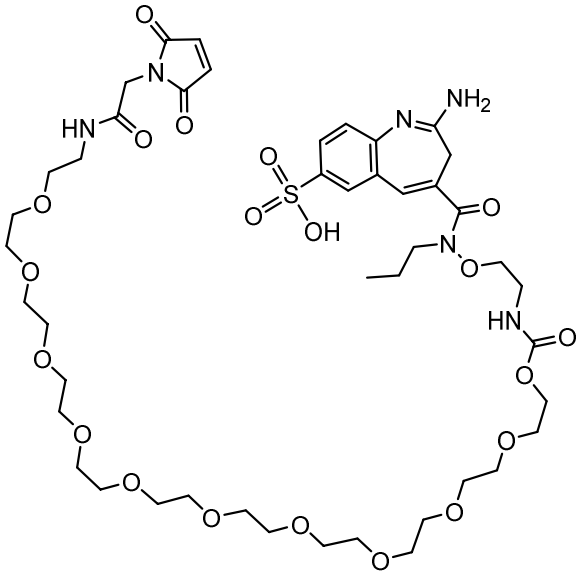

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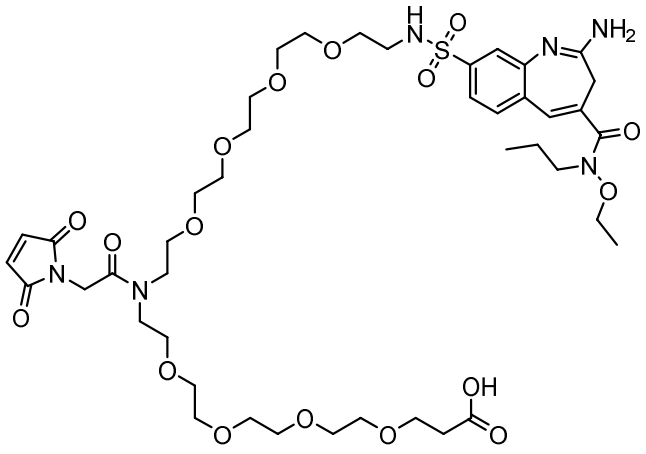

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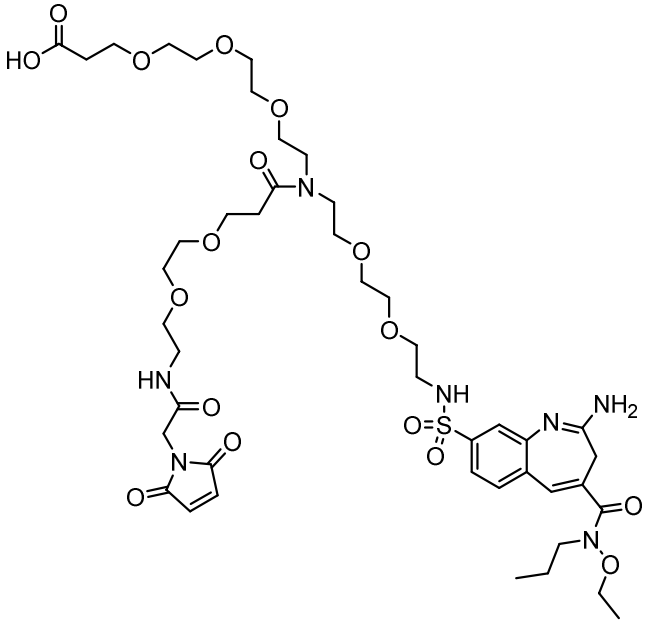

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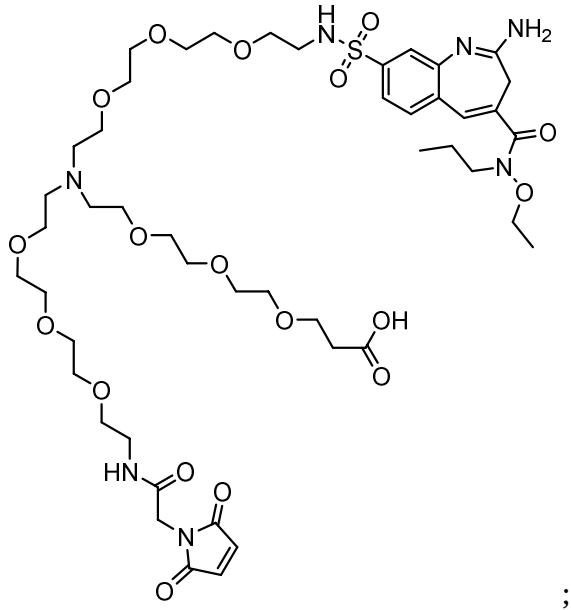
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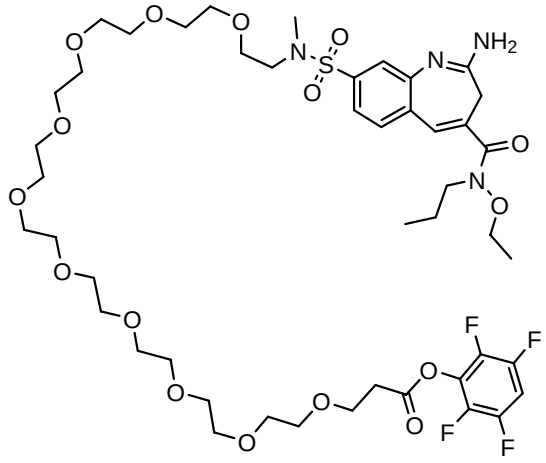
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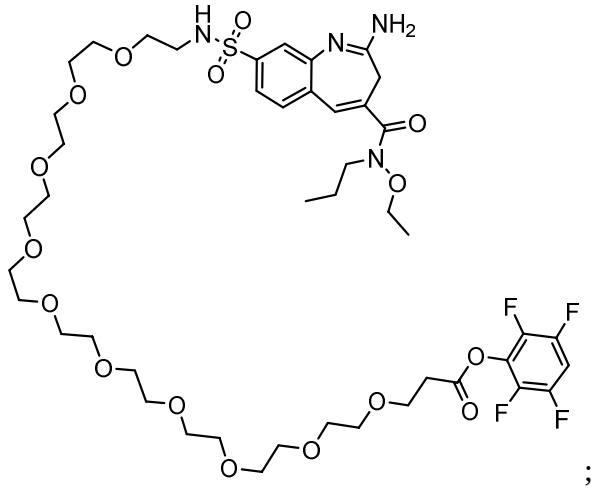
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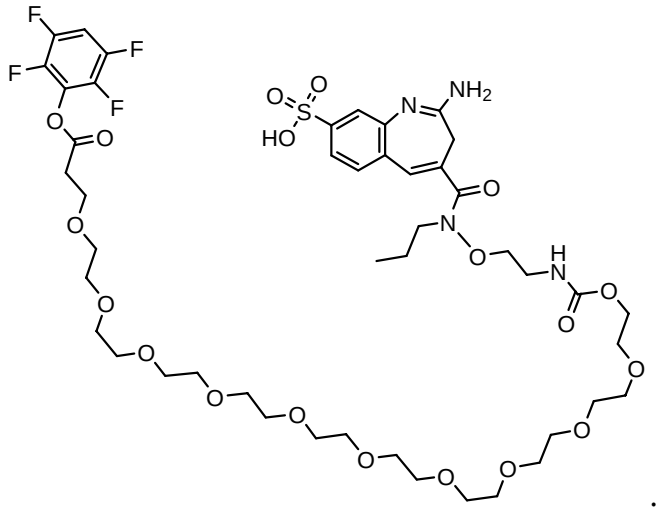
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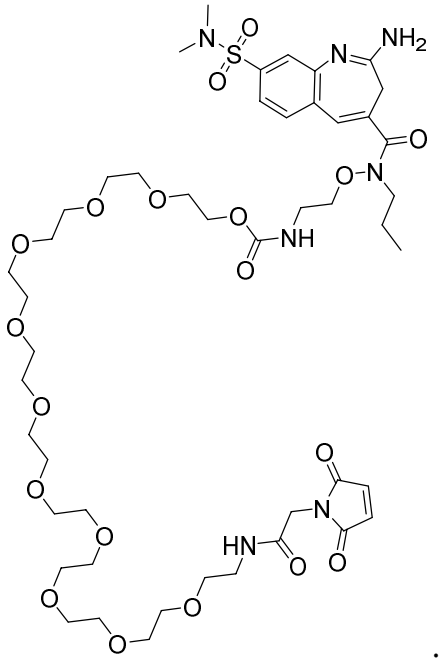


; and



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27. The immunoconjugate of claim 26 prepared by conjugation of an antibody with the 8-sulfonyl-2-aminobenzazepine-linker compound:



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