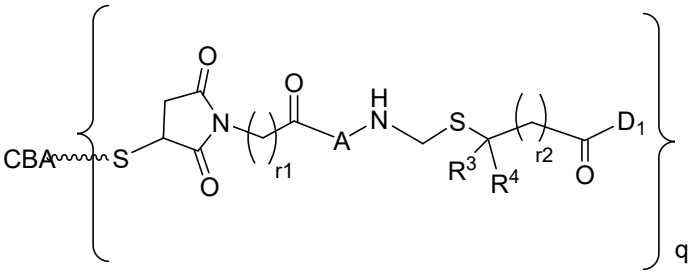
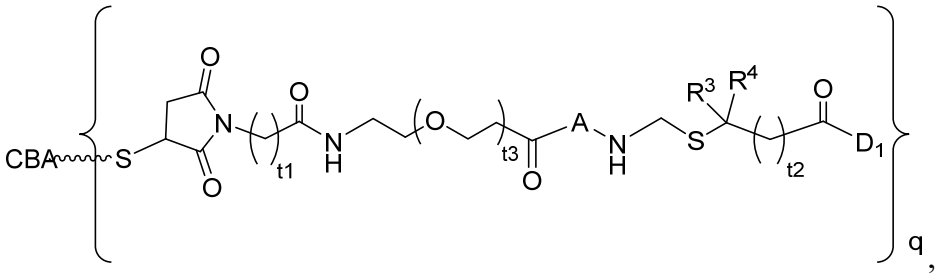
CLAIMS

1. A cell-binding agent-cytotoxic agent conjugate represented by the following formula:



; or



,

or a pharmaceutically acceptable salt thereof, wherein:

CBA~S— is a cell-binding agent connected to the cytotoxic agent through a Cys thiol group;

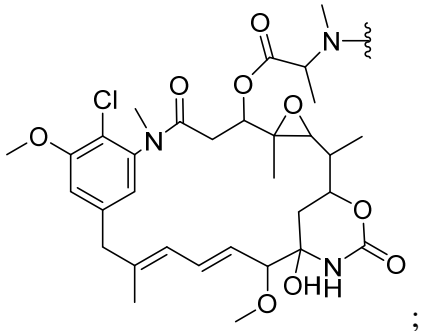
R^3 and R^4 are each independently H or Me;

r1 and t1 are each independently an integer from 1 to 6;

r2 and t2 are each independently an integer from 1 to 7;

t3 is an integer from 1 to 12 ;

D_1 is represented by the following formula:



;

A is an amino acid residue or a peptide comprising 2 to 20 amino acid residues;

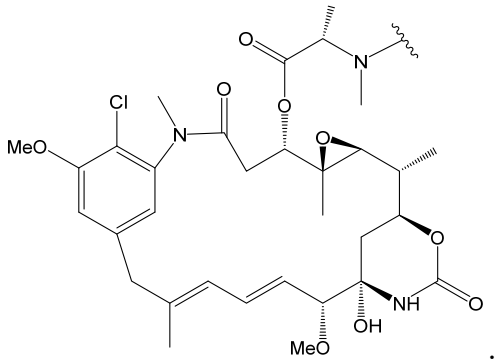
and

q is an integer from 1 to 20.

2. The conjugate of claim 1, wherein A is a peptide cleavable by a protease expressed in tumor tissue.

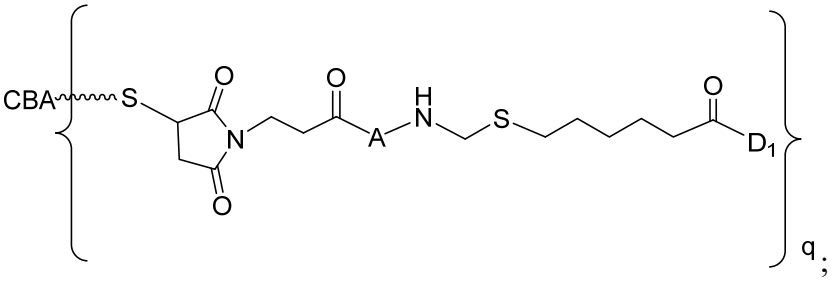
3. The conjugate of claim 1 or 2, wherein A is selected from the group consisting of Gly-Gly-Gly, Ala-Val, Val-Ala, D-Val-Ala, Val-Cit, D-Val-Cit, Val-Lys, Phe-Lys, Lys-Lys, Ala-Lys, Phe-Cit, Leu-Cit, Ile-Cit, Phe-Ala, Phe-N^9-tosyl-Arg, Phe-N^9-nitro-Arg, Phe-Phe-Lys, D-Phe-Phe-Lys, Gly-Phe-Lys, Leu-Ala-Leu, Ile-Ala-Leu, Val-Ala-Val, Ala-Ala-Ala, D-Ala-Ala-Ala, Ala-D-Ala-Ala, Ala-Ala-D-Ala, Ala-Leu-Ala-Leu (SEQ ID NO: 1), β-Ala-Leu-Ala-Leu (SEQ ID NO: 2), Gly-Phe-Leu-Gly (SEQ ID NO: 3), Val-Arg, Arg-Arg, Val-D-Cit, Val-D-Lys, Val-D-Arg, D-Val-Cit, D-Val-Lys, D-Val-Arg, D-Val-D-Cit, D-Val-D-Lys, D-Val-D-Arg, D-Arg-D-Arg, Ala-Ala, Ala-D-Ala, D-Ala-Ala, D-Ala-D-Ala, Ala-Met, Gln-Val, Asn-Ala, Gln-Phe, Gln-Ala, D-Ala-Pro, and D-Ala-tBu-Gly, wherein the first amino acid in each peptide is connected to the -C(=O)- group and the last amino acid in each peptide is connected to the –NH- group.

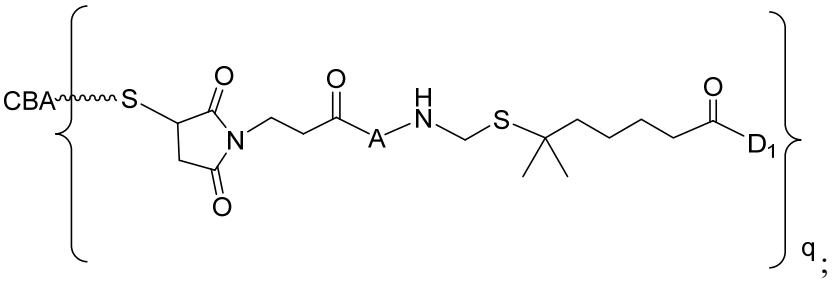
4. The conjugate of any one of claims 1-3, wherein D_1 is represented by the following formula:

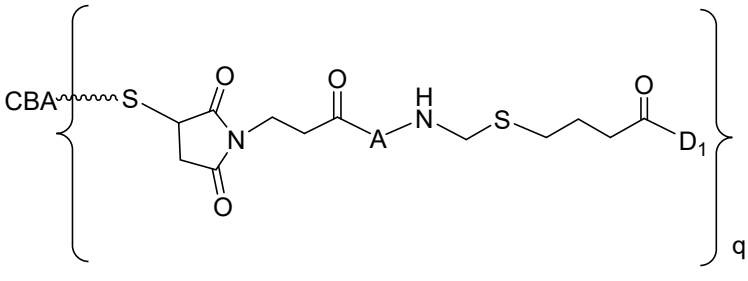


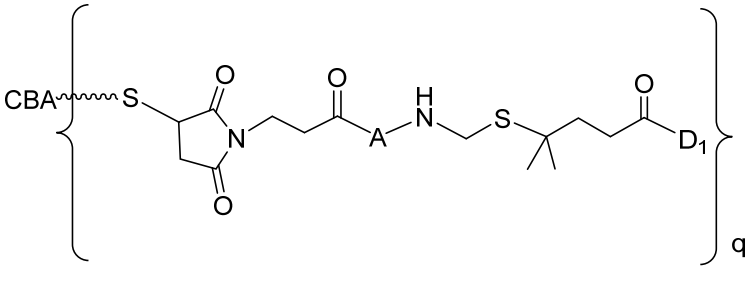
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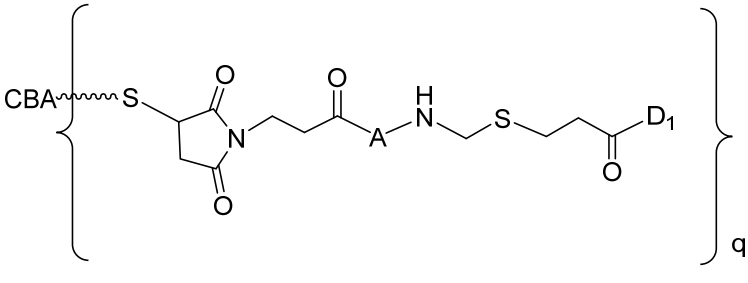
5. The conjugate of claim 1, wherein the conjugate is represented by the following formula:

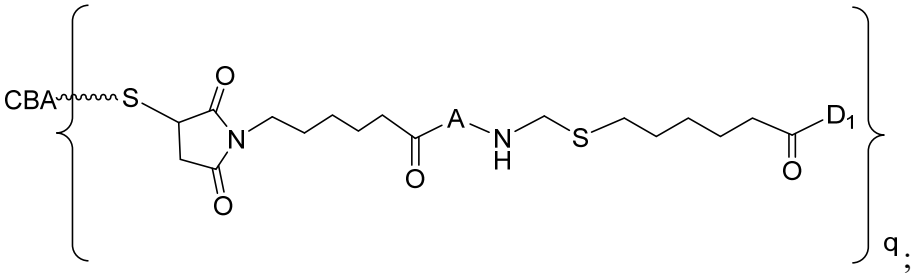

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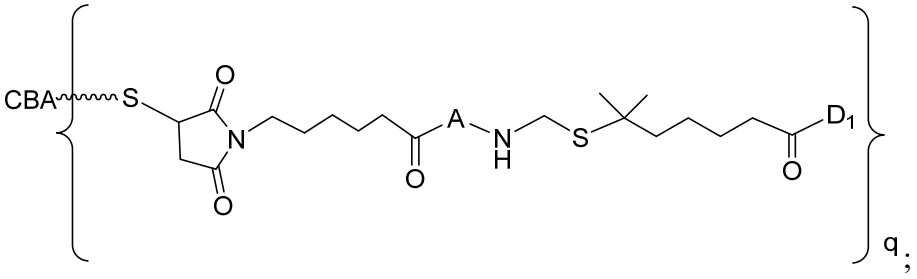

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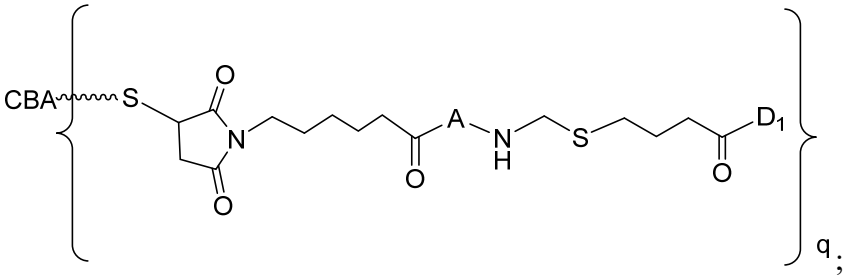

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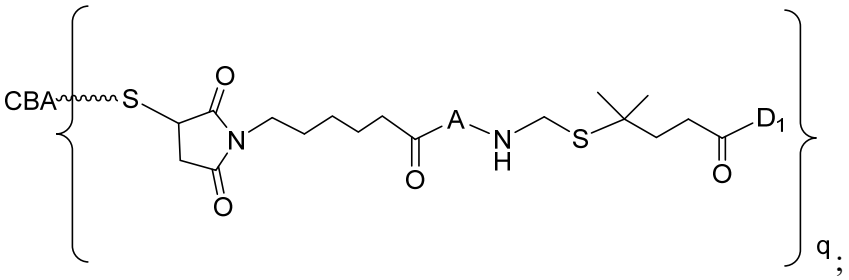

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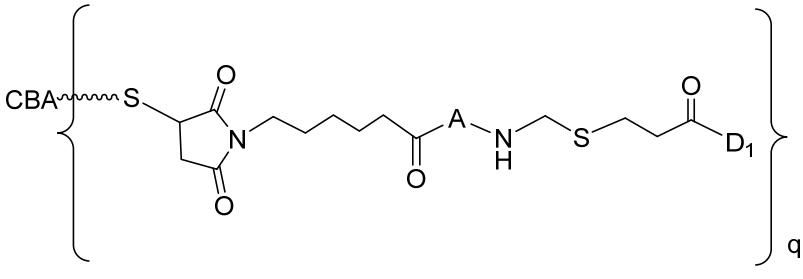

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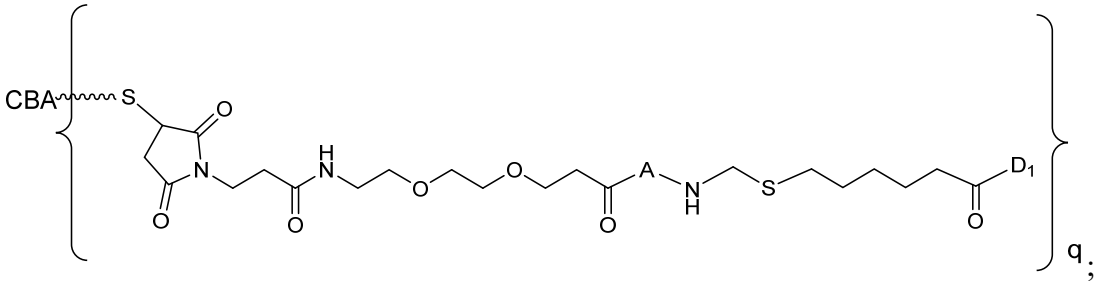

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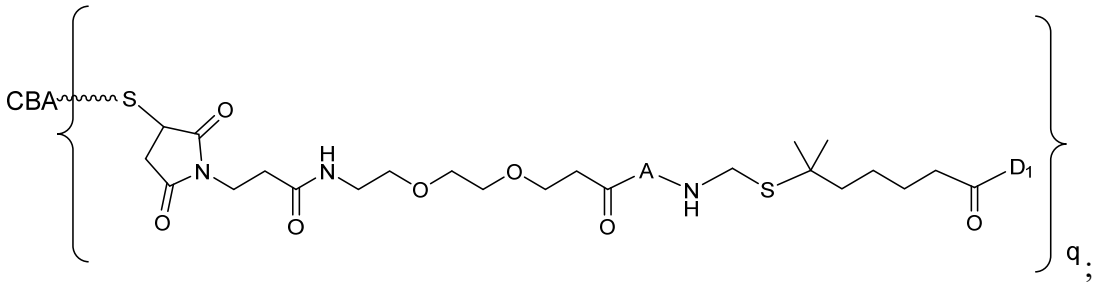

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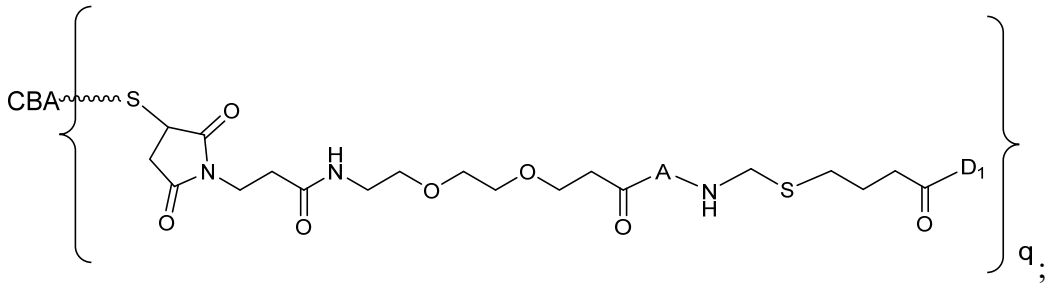

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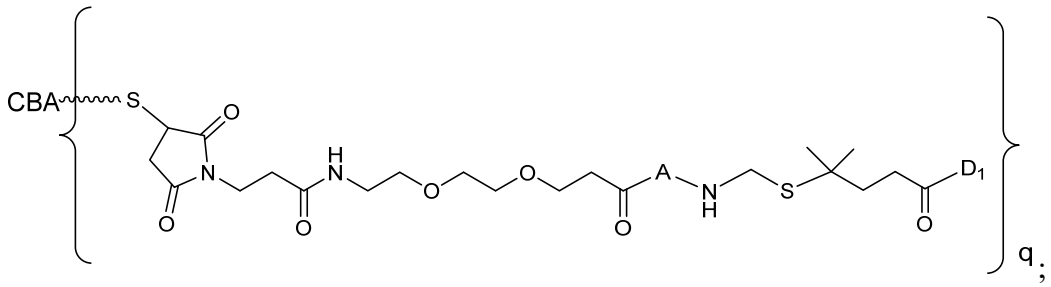

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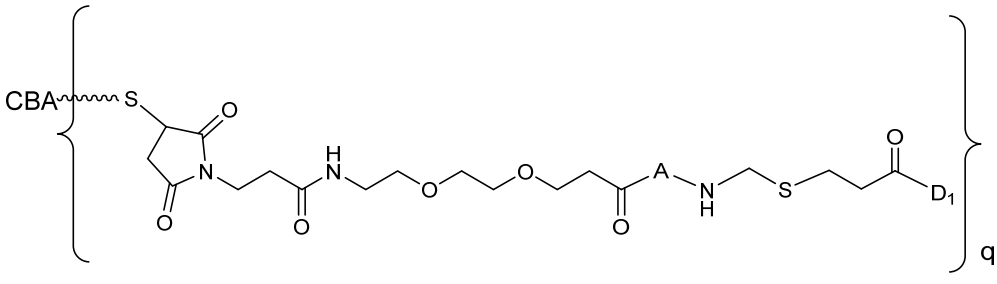

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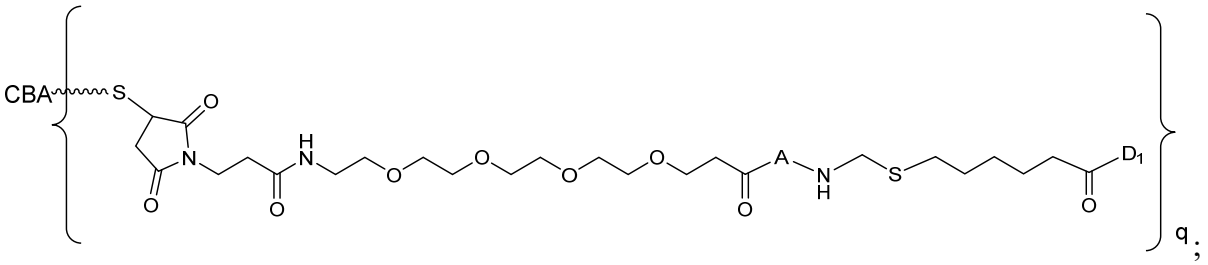

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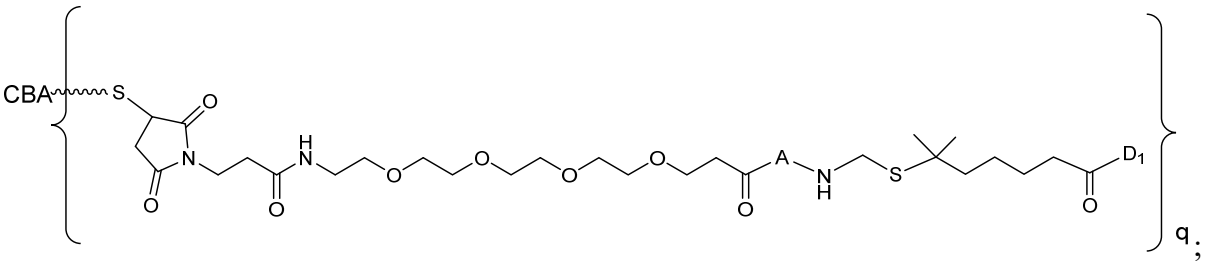

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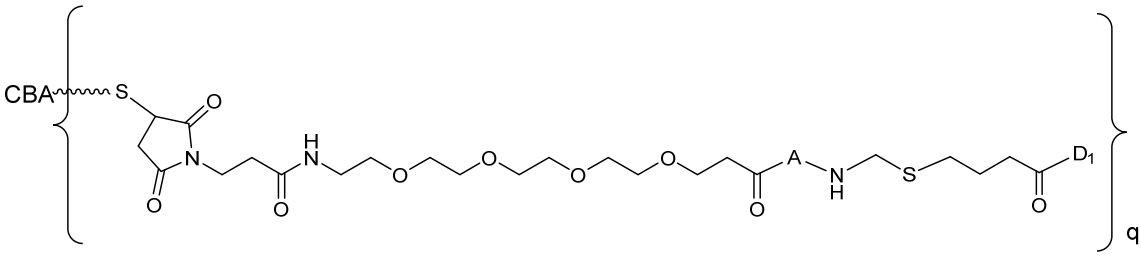

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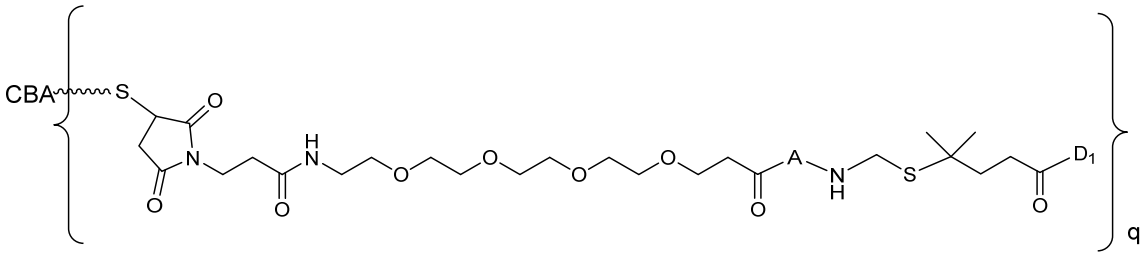

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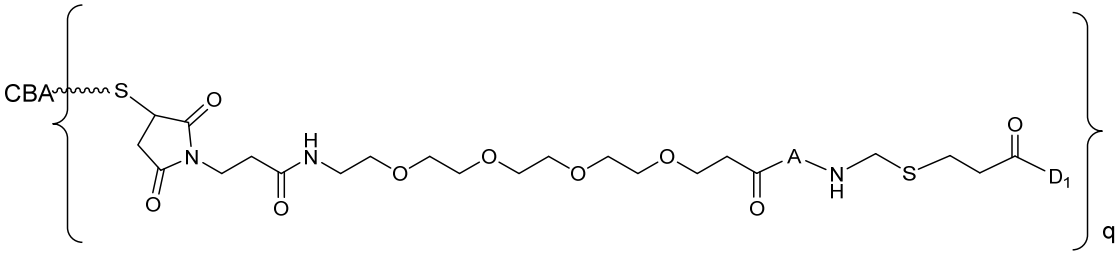

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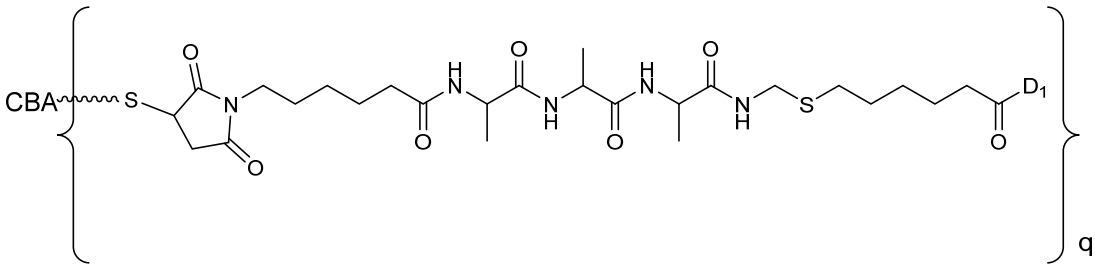


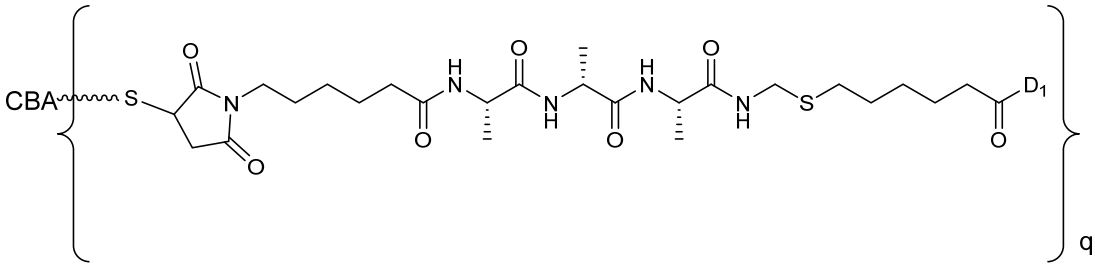
or a pharmaceutically acceptable salt thereof, wherein:

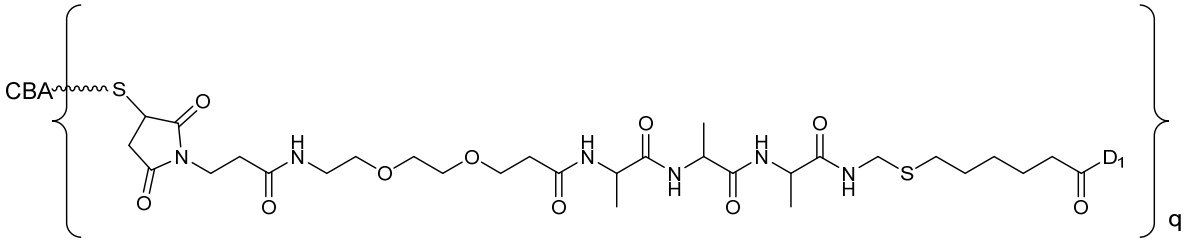
A is Ala-Ala-Ala, Ala-D-Ala-Ala, Ala-Ala, D-Ala-Ala, Val-Ala, D-Val-Ala, D-Ala-Pro, or D-Ala-tBu-Gly.

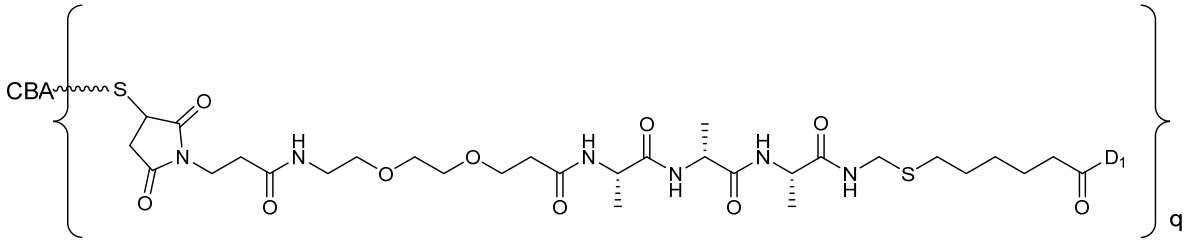
6. The conjugate of claim 5, wherein the conjugate is represented by the following

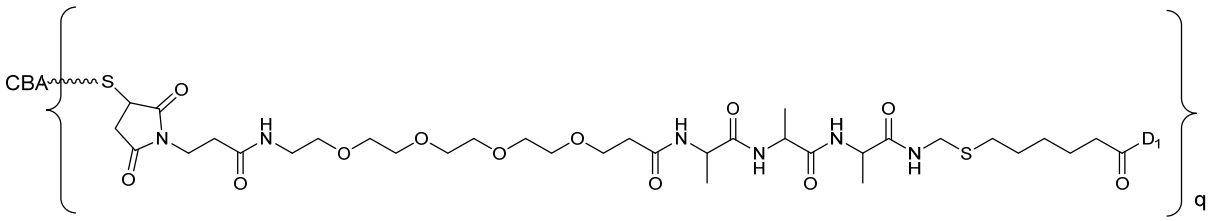
formula:

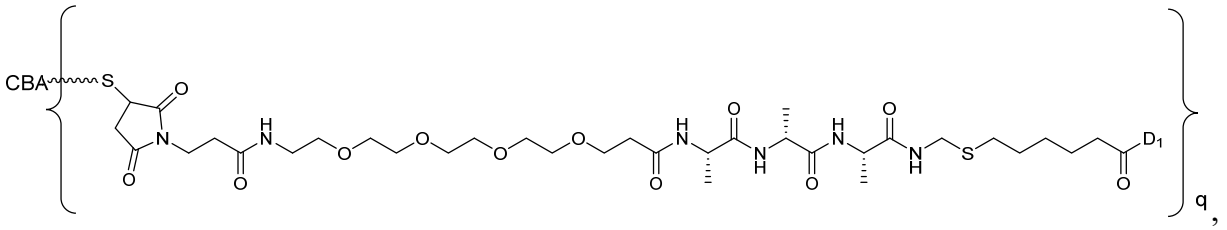

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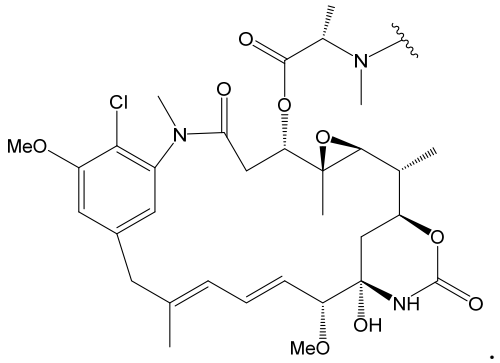

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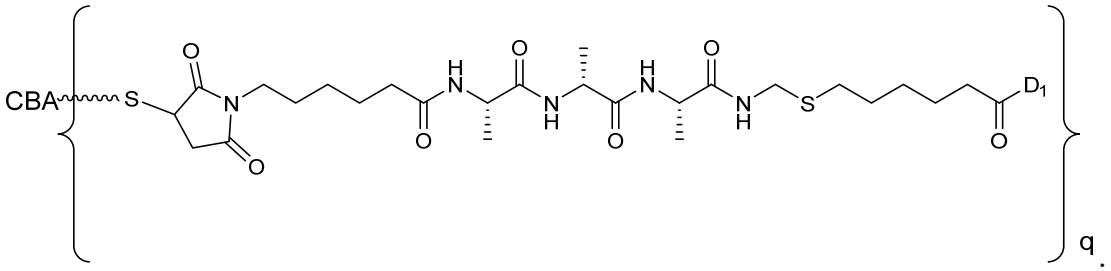

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wherein D_1 is represented by the following formula:



7. The conjugate of claim 6, wherein the conjugate is represented by the following formula:



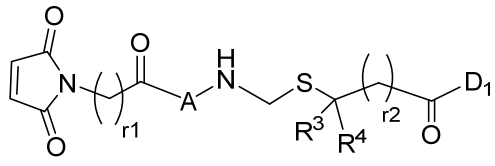
8. The conjugate of any one of claims 1-7, wherein, the cell-binding agent is an antibody or an antigen-binding fragment thereof, a single chain antibody, a single chain antibody fragment that specifically binds to a target cell, a monoclonal antibody, a single chain monoclonal antibody, or a monoclonal antibody fragment that specifically binds to a target cell, a chimeric antibody, a chimeric antibody fragment that specifically binds to a target cell, a domain antibody, a domain antibody fragment that specifically binds to a target cell, a probody, a nanobody, a lymphokine, a hormone, a vitamin, a growth factor, a colony stimulating factor, a nutrient-transport molecule, a Bicycles® peptide, or a pentarin.

9. The conjugate of claim 8, wherein the cell-binding agent is an antibody or an antigen-binding fragment thereof, a resurfaced antibody or a resurfaced antibody fragment

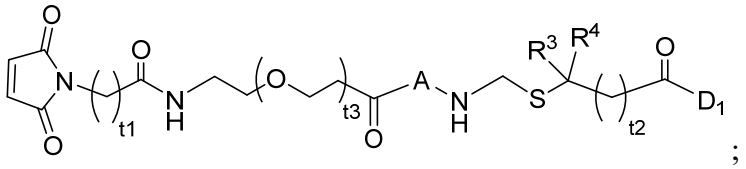
thereof, a monoclonal antibody or a monoclonal antibody fragment thereof, a humanized antibody or a humanized antibody fragment thereof, a chimeric antibody or a chimeric antibody fragment thereof.

10. The conjugate of claim 8, wherein the cell-binding agent is an anti-folate receptor antibody or an antibody fragment thereof, an anti-EGFR antibody or an antibody fragment thereof, an anti-CD33 antibody or an antibody fragment thereof, an anti-CD19 antibody or an antibody fragment thereof, an anti-Muc1 antibody or an antibody fragment thereof, or an anti-CD37 antibody or an antibody fragment thereof, or an anti-CD123 antibody or an antibody fragment thereof.

11. A compound represented by the following formula:



; or



;

or a pharmaceutically acceptable salt thereof, wherein:

R^3 and R^4 are each independently H or Me;

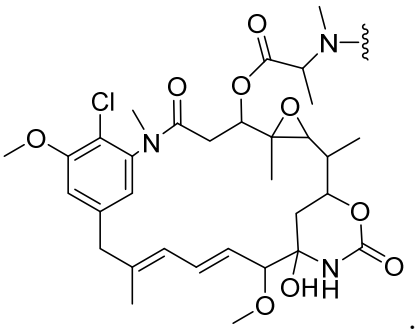
r1 and t1 are each independently an integer from 1 to 6;

r2 and t2 are each independently an integer from 1 to 7;

t3 is an integer from 1 to 12;

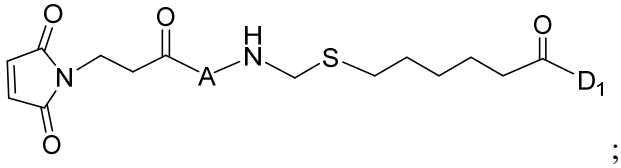
A is an amino acid or a peptide comprising 2 to 20 amino acids; and

D_1 is represented by the following formula:

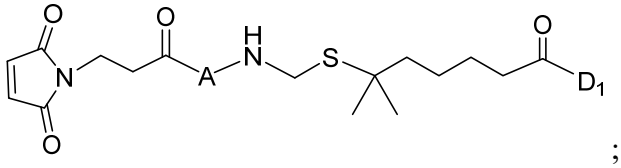


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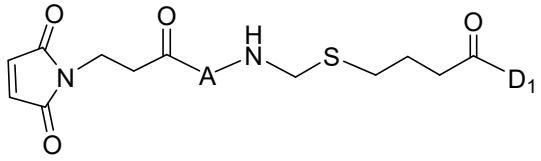
12. The compound of claim 11, wherein the compound is represented by the following formula:



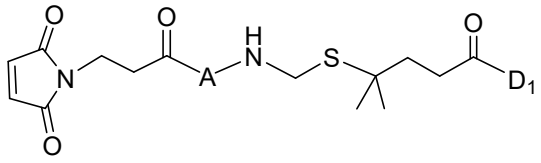
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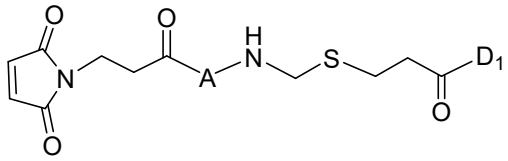
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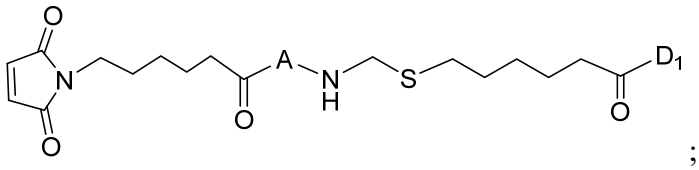
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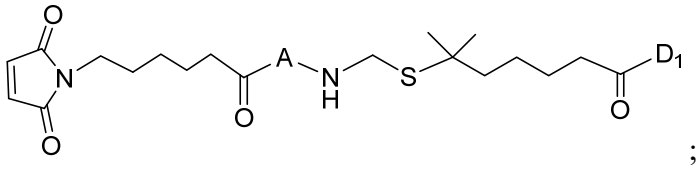


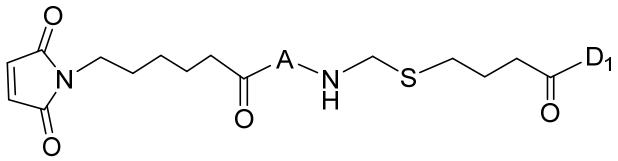
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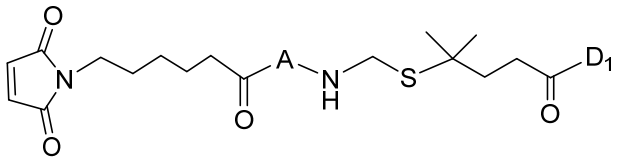


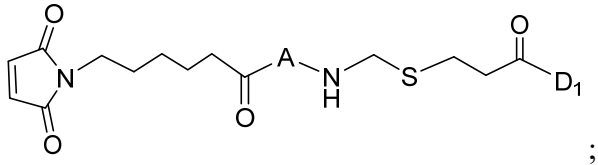
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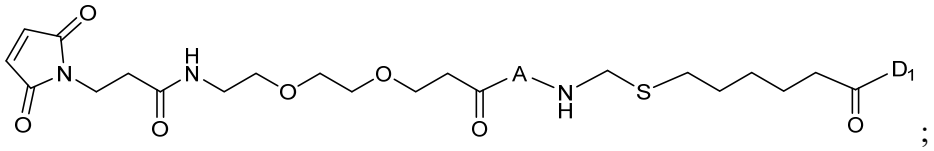

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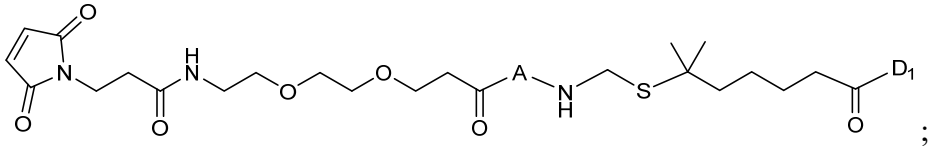

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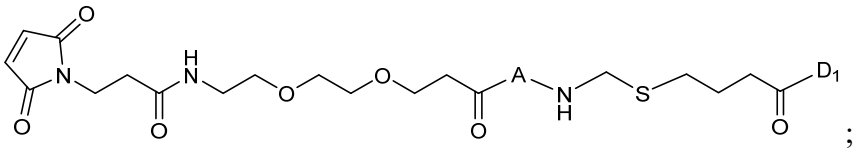

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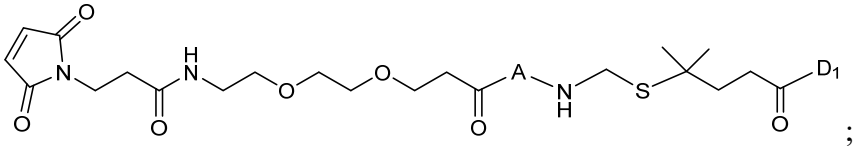

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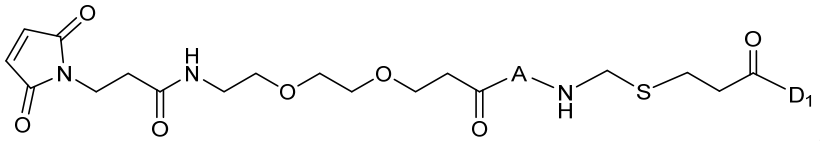

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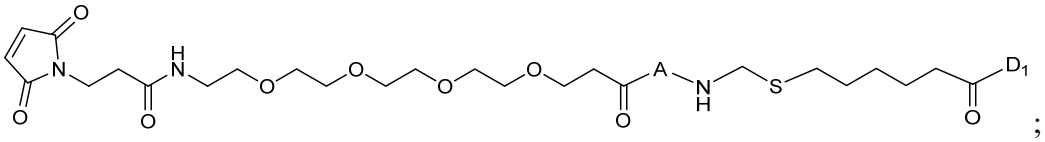

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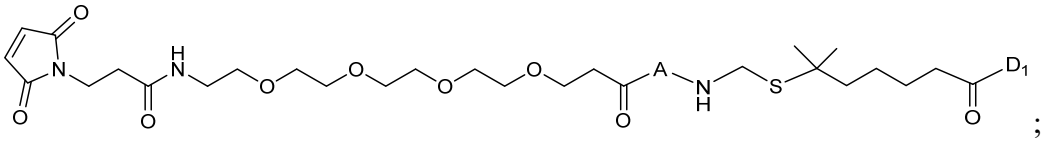

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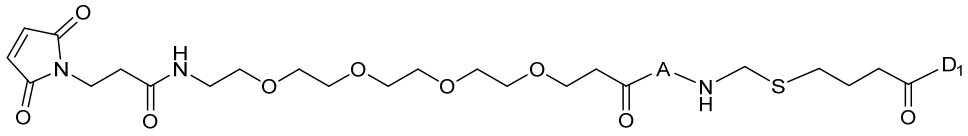

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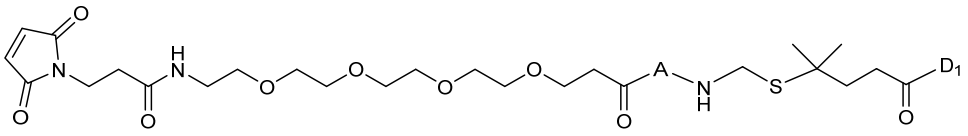

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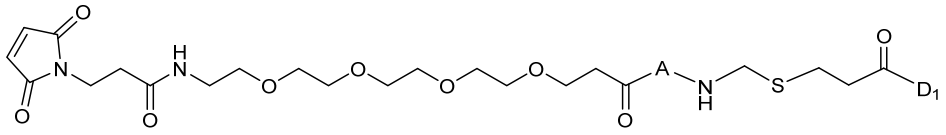

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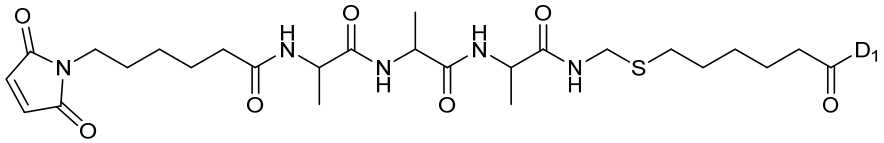

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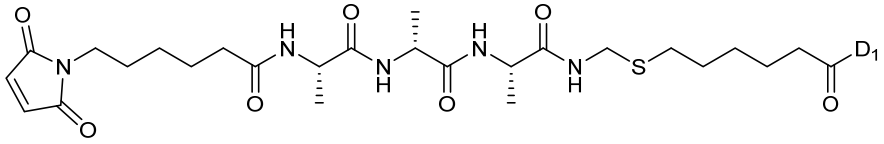


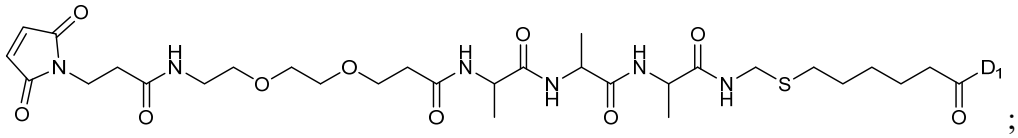
or a pharmaceutically acceptable salt thereof, wherein:

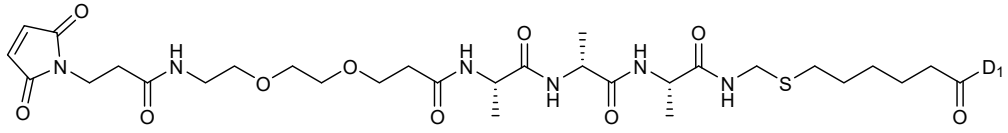
A is Ala-Ala-Ala, Ala-D-Ala-Ala, Ala-Ala, D-Ala-Ala, Val-Ala, D-Val-Ala, D-Ala-Pro, or D-Ala-tBu-Gly.

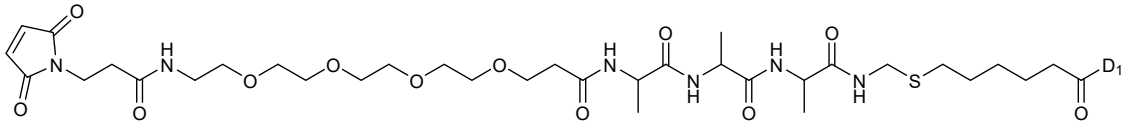
13. The compound of claim 12, wherein the compound is represented by the following formula:

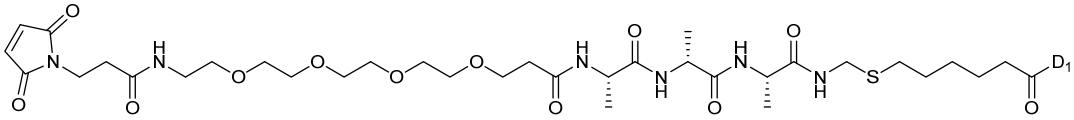

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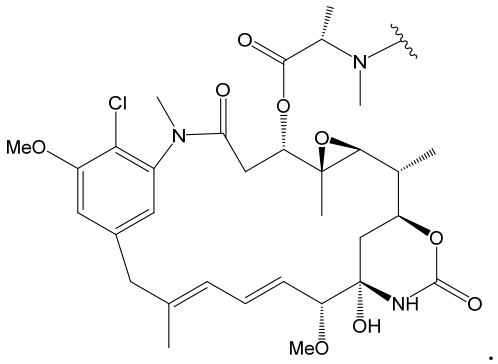

;


;


; or


,

wherein D_1 is represented by the following formula:


.

14. A pharmaceutical composition comprising the conjugate of any one of claims 1-10 and a pharmaceutically acceptable carrier.

15. Use of the conjugate of any one of claims 1-10 in the preparation of a medicament for inhibiting abnormal cell growth or treating a proliferative disorder in a mammal.

16. The use of claim 15, wherein the use is for treating a cancer; and wherein:

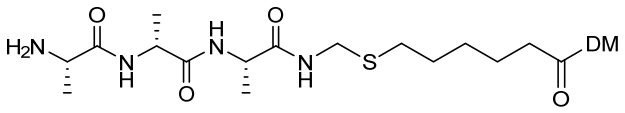
(i) the cancer is selected from renal cancer, breast cancer (e.g., triple-negative breast cancer (TNBC)), colon cancer, brain cancer, prostate cancer, endometrial cancer, cervical cancer, kidney cancer, pancreatic cancer, ovarian cancer (e.g., epithelial ovarian cancer), head and neck cancer, melanoma, colorectal cancer, gastric cancer, squamous cancer, lung cancer (e.g., non

small-cell lung cancer and small-cell lung cancer), testicular cancer, choriocarcinoma, Merkel cell carcinoma, sarcoma (e.g., osteosarcoma, chondrosarcoma, liposarcoma, and leiomyosarcoma), glioblastoma, neuroblastoma, lymphoma (e.g., non-Hodgkin lymphoma), myelodysplastic syndrome (MDS), peritoneal cancer, fallopian tube cancer, uterine cancer or leukemia (e.g., acute myeloid leukemia (AML), acute monocytic leukemia, promyelocytic leukemia, eosinophilic leukemia, acute lymphoblastic leukemia (e.g., B-ALL), chronic lymphocytic leukemia (CLL), and chronic myeloid leukemia (CML));

(ii) the cancer is breast cancer, ovarian cancer or renal cancer; or

(iii) the cancer is cervical cancer, ovarian cancer, uterine cancer, endometrial cancer, or fallopian tube cancer.

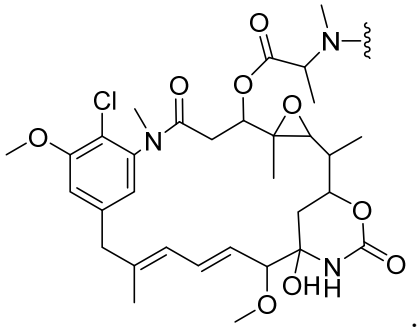
17. A compound of the following formula:



I-1a ,

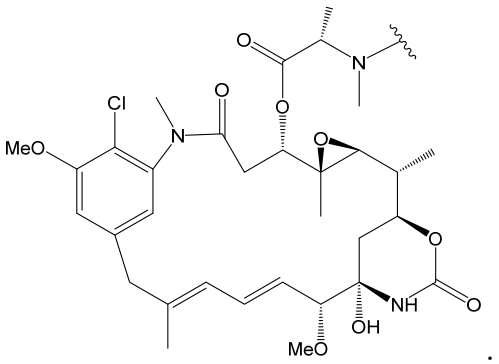
or a pharmaceutically acceptable salt thereof, wherein:

DM is



.

18. The compound of claim 17, wherein DM is:


O
N
O
Cl
O
MeO
N
O
O
O
NH
O
OH
MeO