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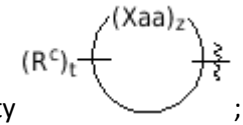
1. A compound having the structure of formula R-I:

$$LG{-}RG{-}L^{RM}{-}MOI,$$

(R-I)

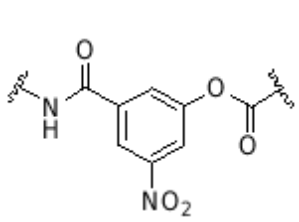
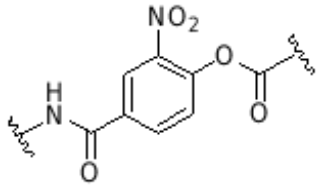
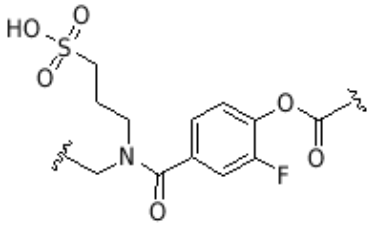
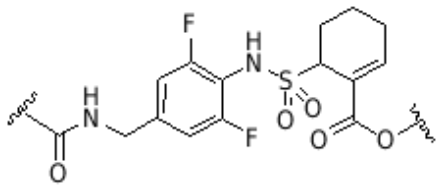
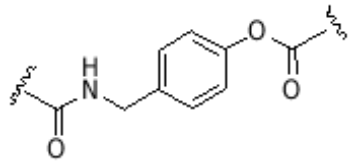
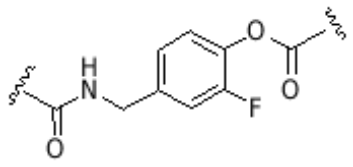
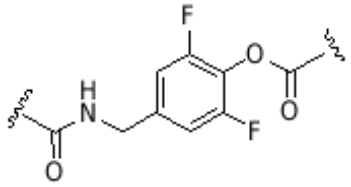
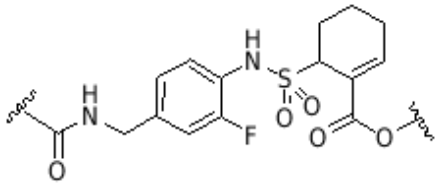
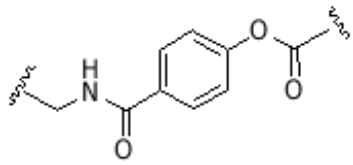
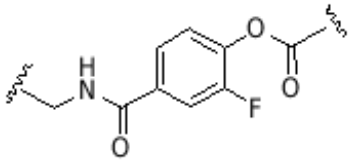
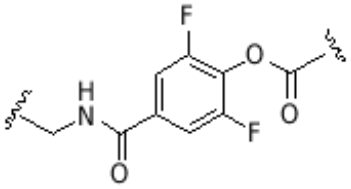
or a salt thereof, wherein:

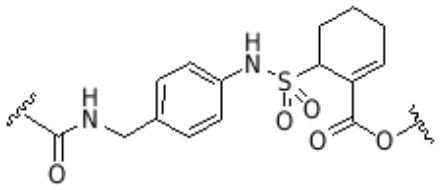
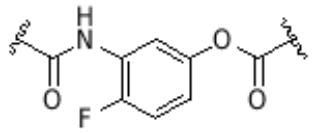
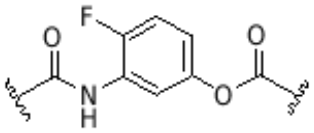
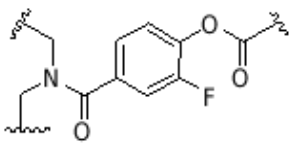
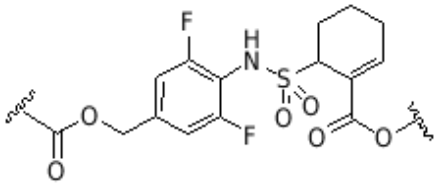
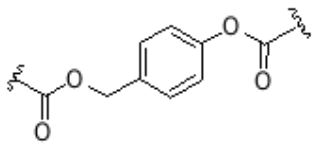
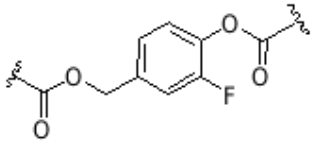
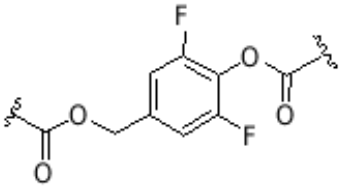
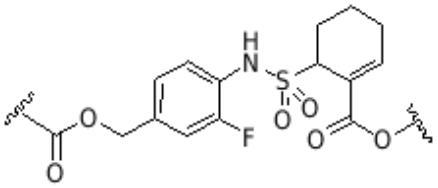
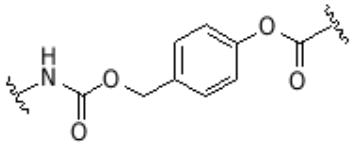
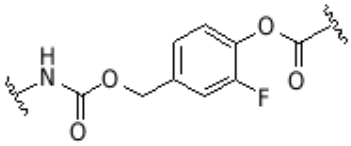
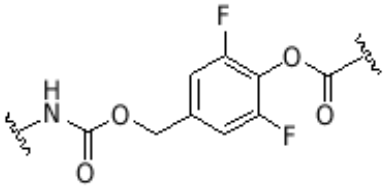
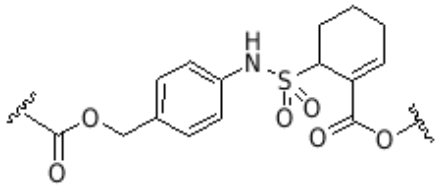
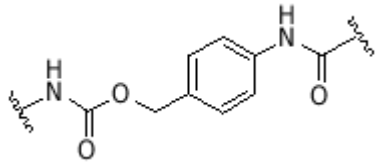
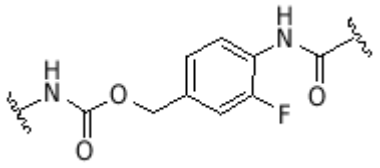
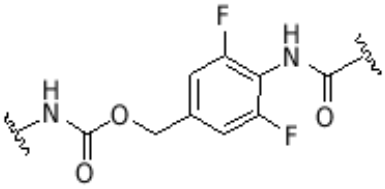
LG is $R^{LG}{-}L^{LG}$;

R^{LG} is an antibody binding moiety ;

L^{LG} is $-L^{LG1}-$ or $-L^{LG1}-L^{LG2}-$;

RG comprises one or more groups selected from:

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each of L^{LG1}, L^{LG2}, and L^{RM} is independently L;

each L is independently a covalent bond, or a bivalent optionally substituted, linear or branched C_{1-100} group comprising one or more aliphatic moieties, aryl moieties, heteroaliphatic moieties each independently having 1-20 heteroatoms, heteroaromatic moieties each independently having 1-20 heteroatoms, or any combinations of any one or more of such moieties, wherein one or more methylene units of the group are optionally and independently replaced with C_{1-6} alkylene, C_{2-6} alkenylene, a bivalent C_{1-6} heteroaliphatic group

having 1-5 heteroatoms, —C≡C—, −Cy−, −C(R')$_2$−, −O−, −S−, −S−S−, −N(R')−, −C(O)−, −C(S)−, −C(NR')−, −C(O)N(R')−, −C(O)C(R')$_2$N(R')−, −N(R')C(O)N(R')−, −N(R')C(O)O−, −S(O)−, −S(O)$_2$−, −S(O)$_2$N(R')−, −C(O)S−, −C(O)O−, −P(O)(OR')−, −P(O)(SR')−, −P(O)(R')−, −P(O)(NR')−, −P(S)(OR')−, −P(S)(SR')−, −P(S)(R')−, −P(S)(NR')−, −P(R')−, −P(OR')−, −P(SR')−, −P(NR')−, an amino acid residue, or −[(−O−C(R')$_2$−C(R')$_2$−)$_n$]−, wherein n is 1-20;

each −Cy− is independently an optionally substituted bivalent monocyclic, bicyclic or polycyclic group wherein each monocyclic ring is independently selected from a C_{3-20} cycloaliphatic ring, a C_{6-20} aryl ring, a 5-20 membered heteroaryl ring having 1-10 heteroatoms, and a 3-20 membered heterocyclyl ring having 1-10 heteroatoms;

each R' is independently −R, −C(O)R, −CO$_2$R, or −SO$_2$R;

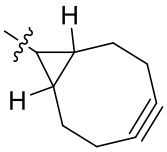
each R is independently −H, or an optionally substituted group selected from C_{1-30} aliphatic, C_{1-30} heteroaliphatic having 1-10 heteroatoms, C_{6-30} aryl, C_{6-30} arylaliphatic, C_{6-30} arylheteroaliphatic having 1-10 heteroatoms, 5-30 membered heteroaryl having 1-10 heteroatoms, and 3-30 membered heterocyclyl having 1-10 heteroatoms, or

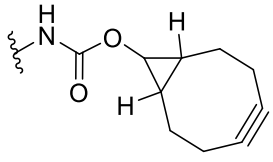
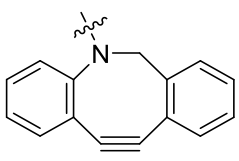
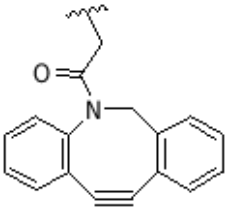
two R groups are optionally and independently taken together to form a covalent bond, or:

two or more R groups on the same atom are optionally and independently taken together with the atom to form an optionally substituted, 3-30 membered, monocyclic, bicyclic or polycyclic ring having, in addition to the atom, 0-10 heteroatoms; or

two or more R groups on two or more atoms are optionally and independently taken together with their intervening atoms to form an optionally substituted, 3-30 membered, monocyclic, bicyclic or polycyclic ring having, in addition to the intervening atoms, 0-10 heteroatoms; and

MOI is a moiety of interest, wherein:

the moiety of interest is or comprises detectable moiety, GGGGG, LPETG, ,

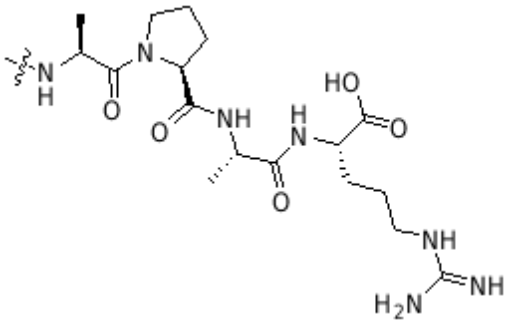
, , or ;

the moiety of interest is a therapeutic agent; or

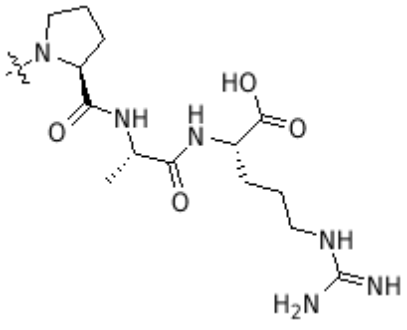
the moiety of interest is an anti-cancer agent,

wherein:

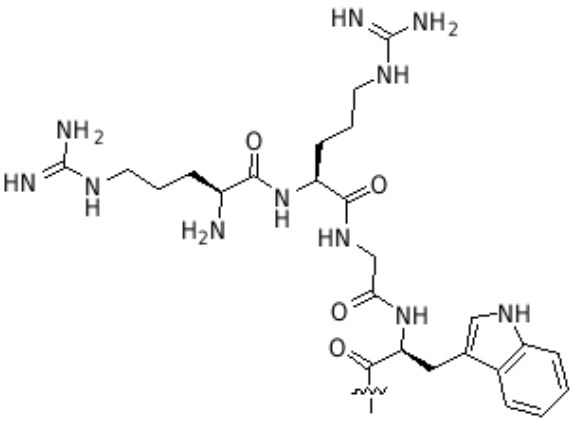
(a) the antibody binding moiety is



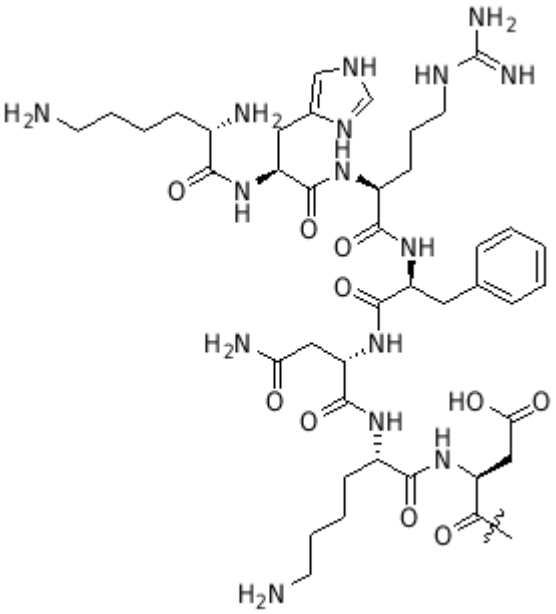
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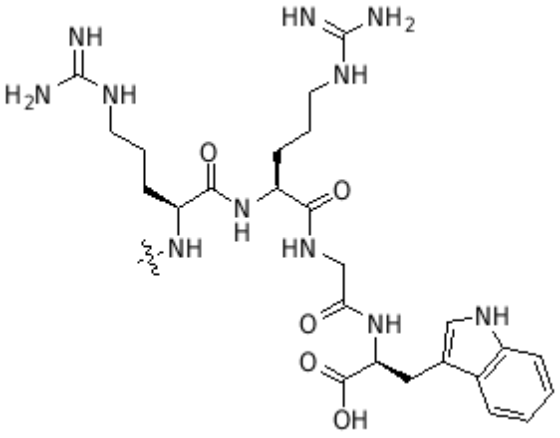
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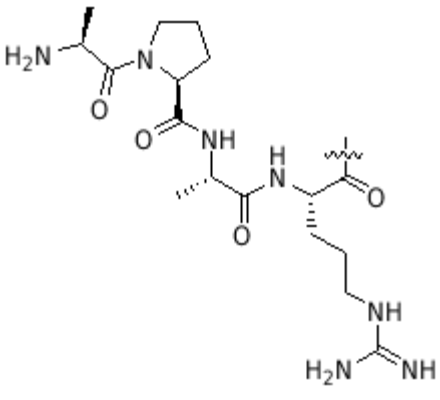
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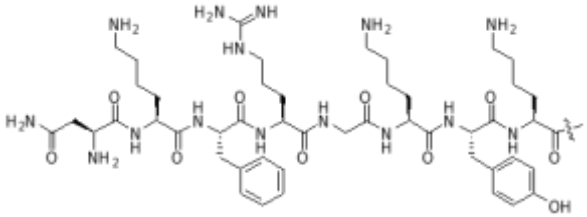
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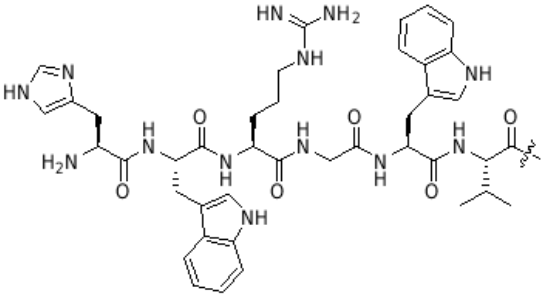
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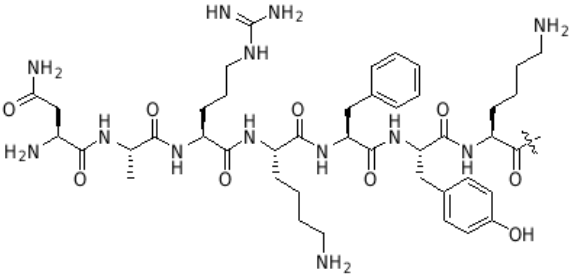
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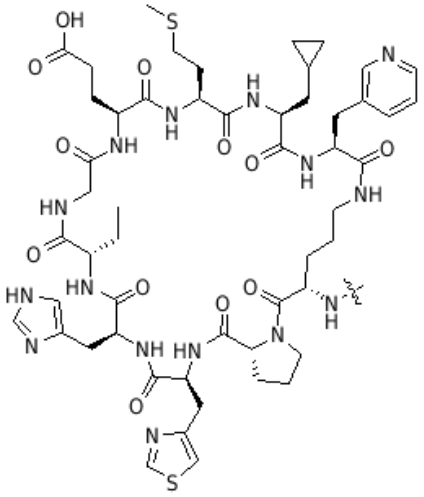
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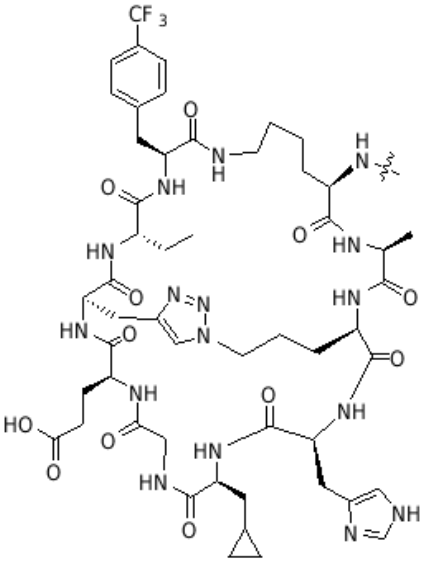
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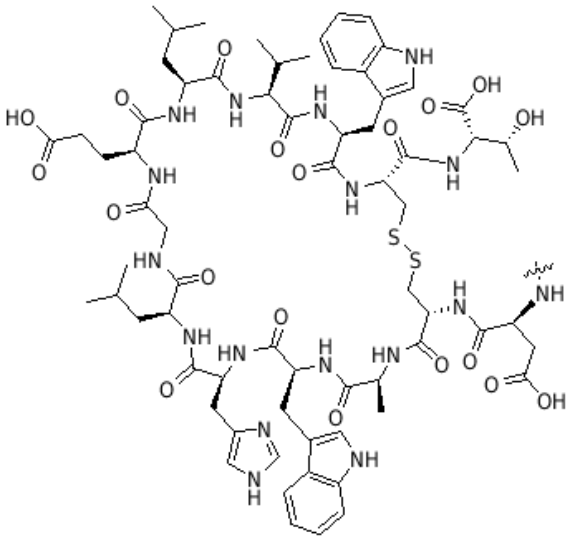
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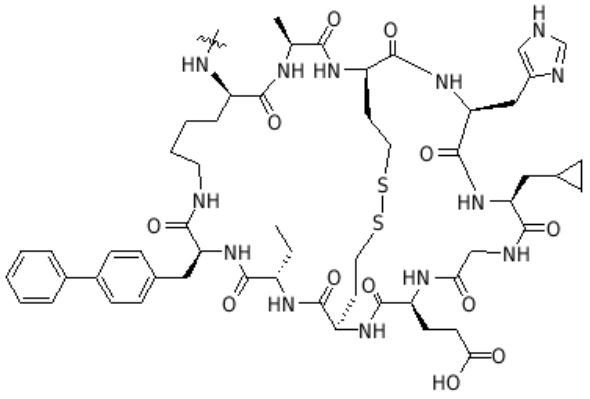
(A-



10),

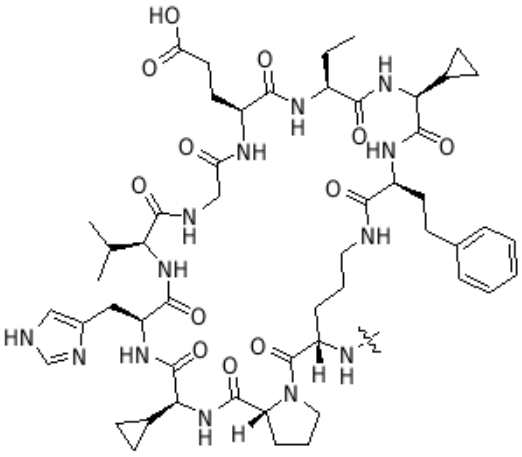


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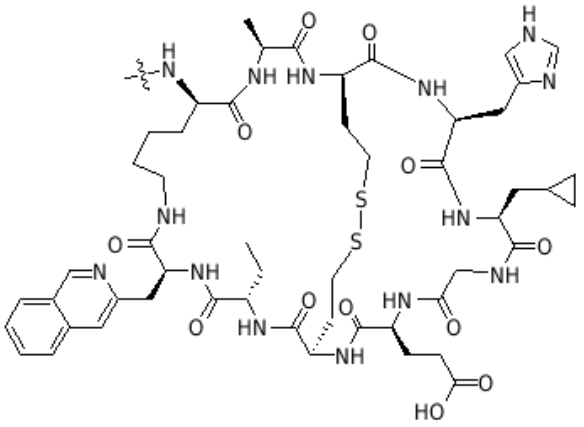


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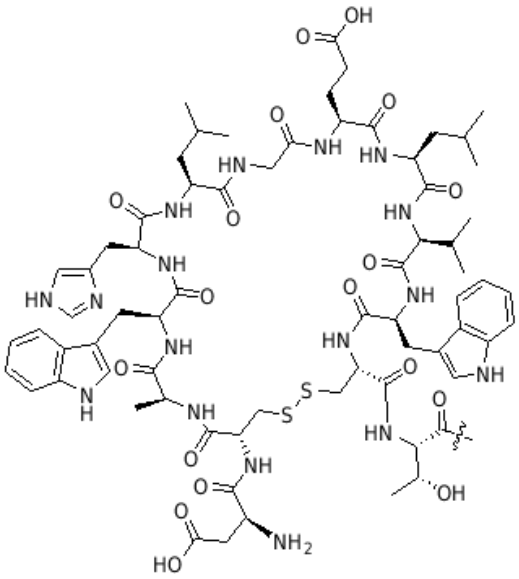
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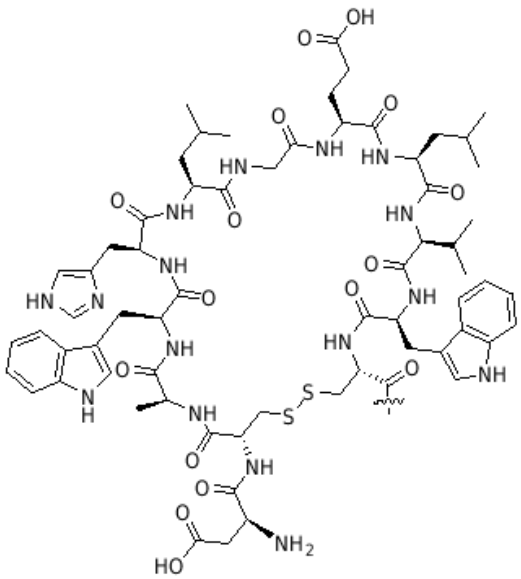
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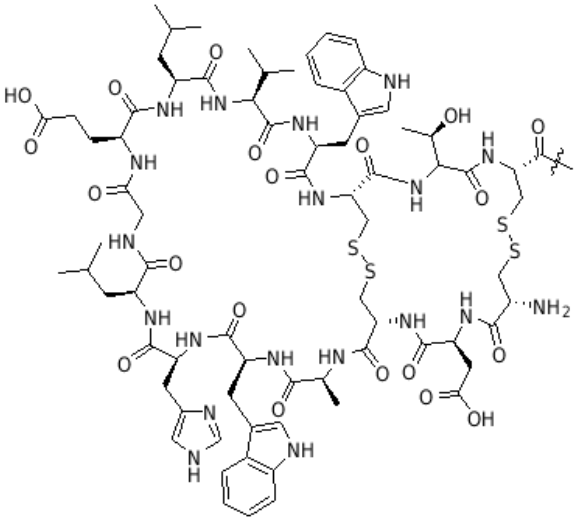


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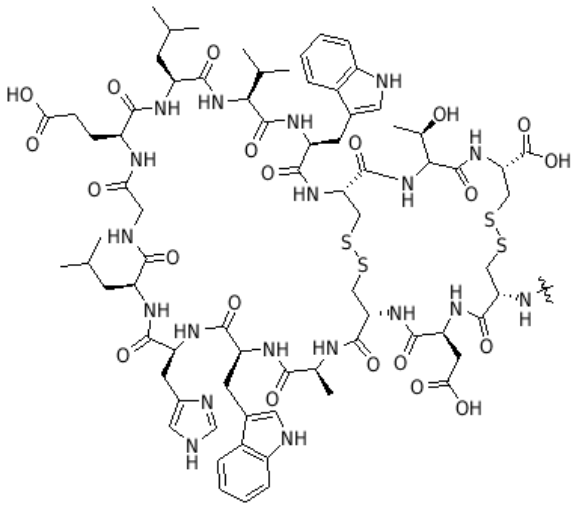
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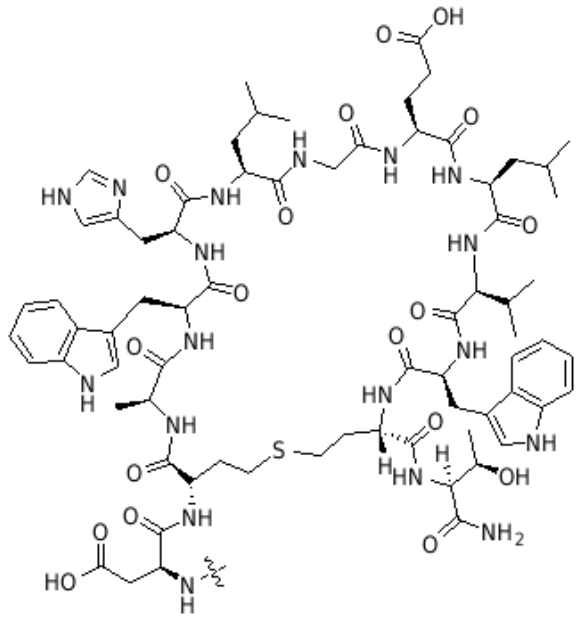


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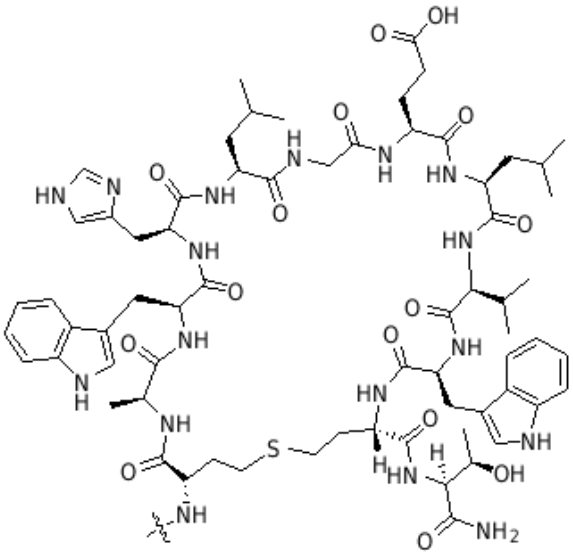
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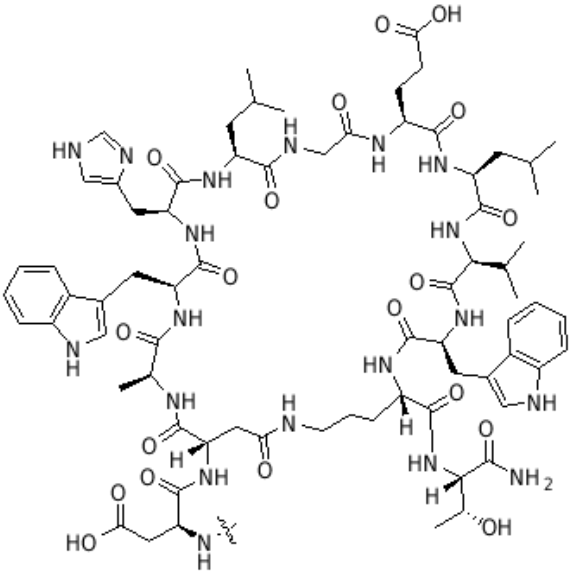
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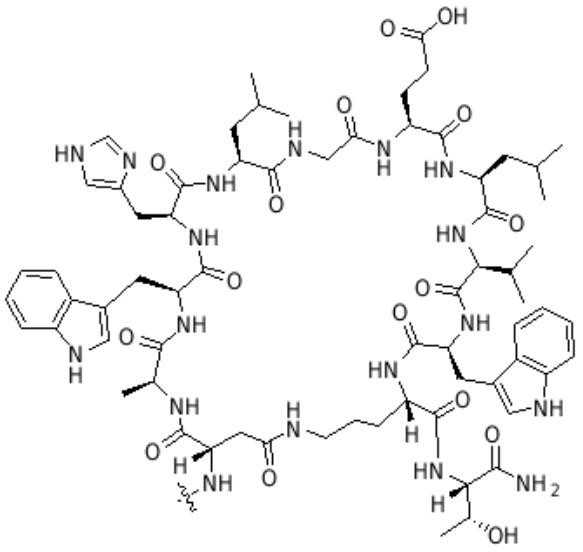
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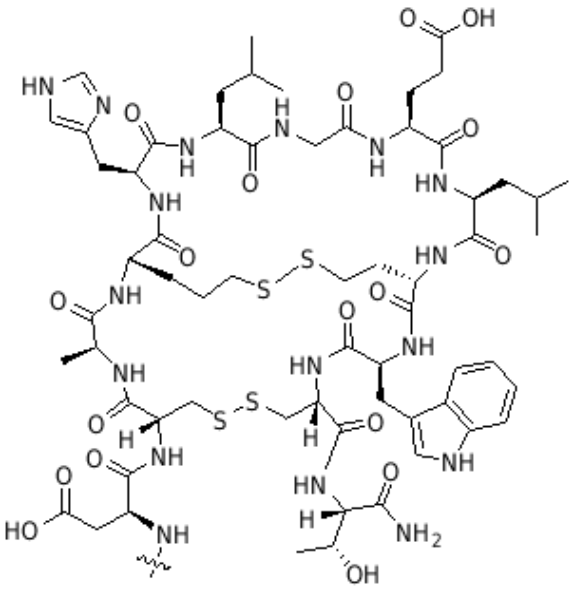
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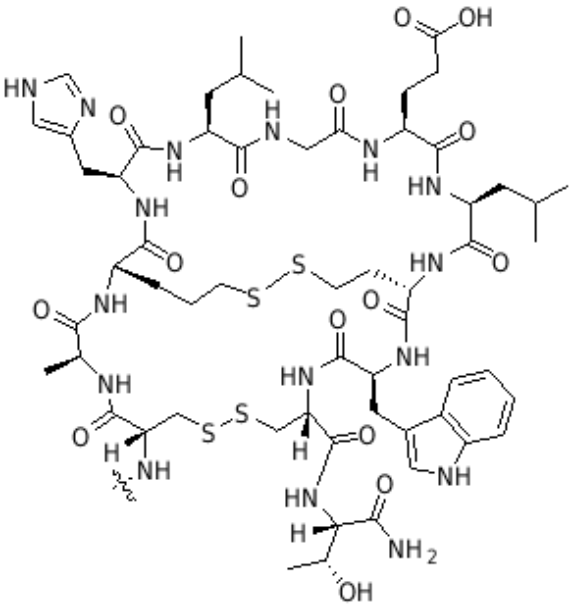
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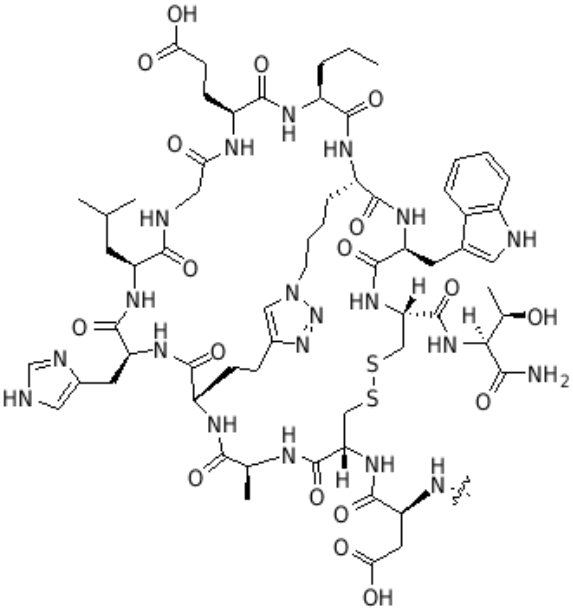
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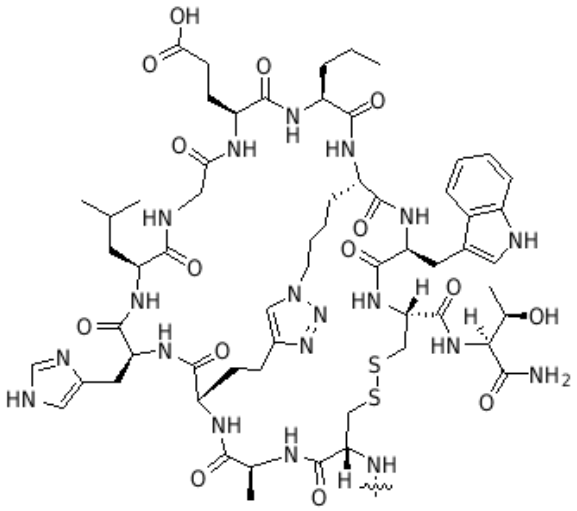
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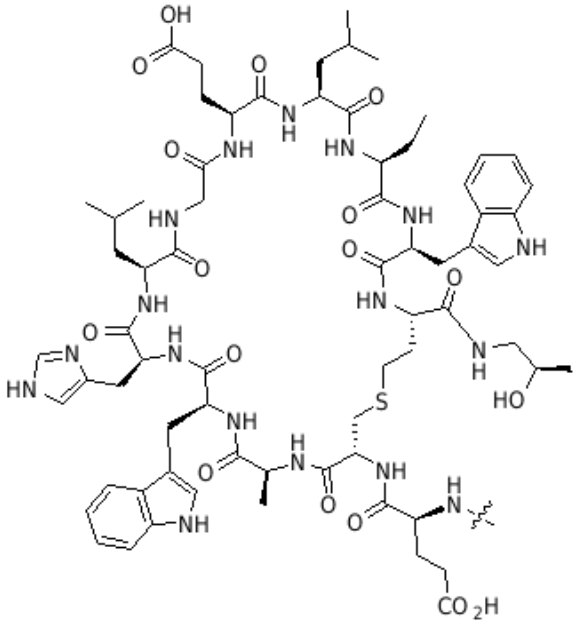
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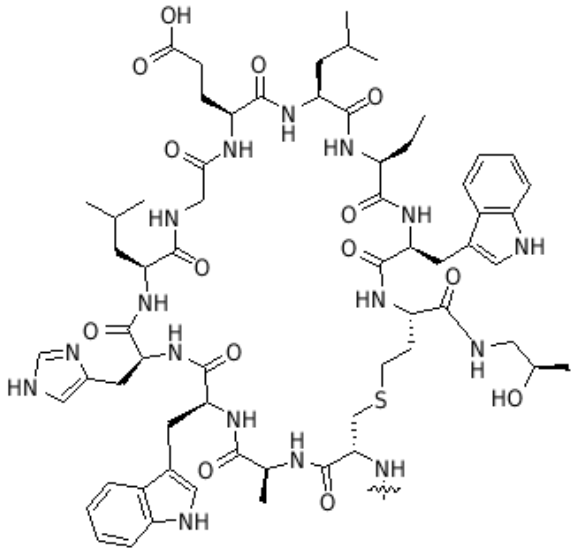
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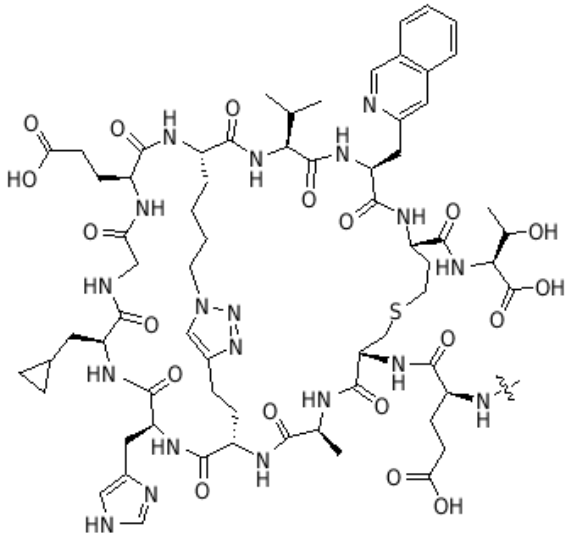
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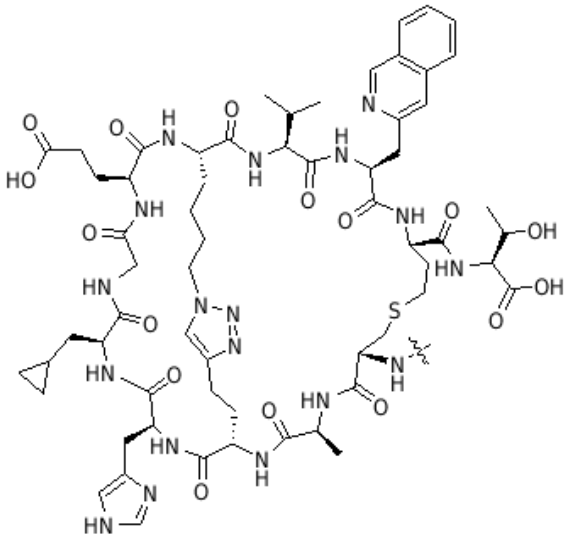
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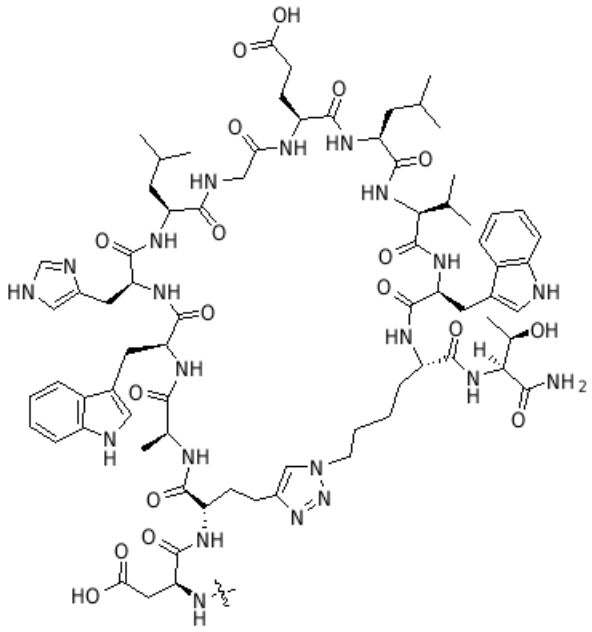
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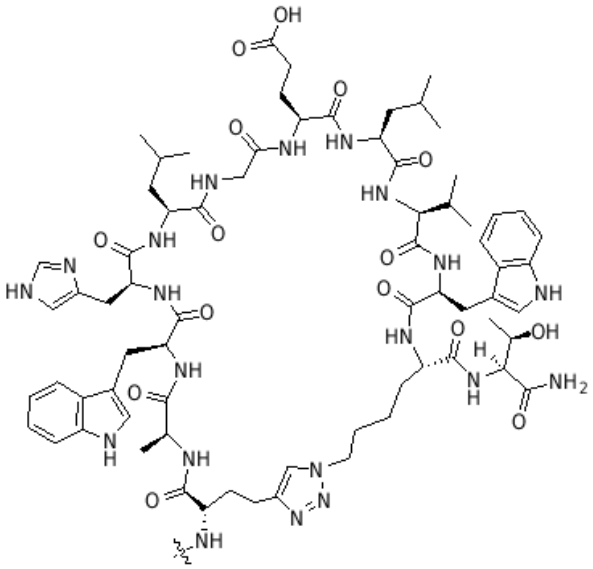
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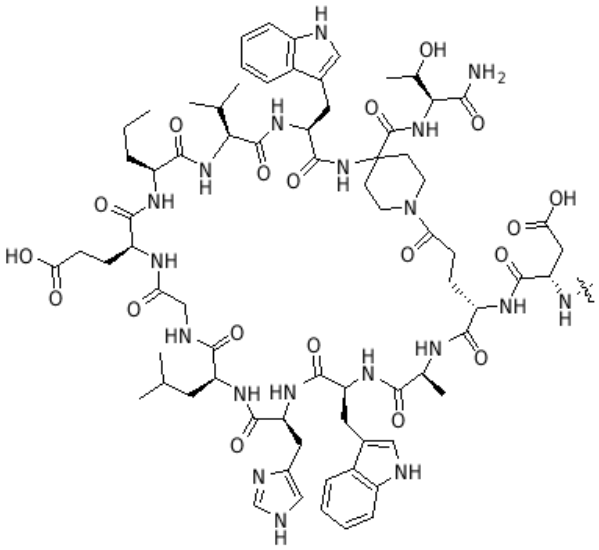
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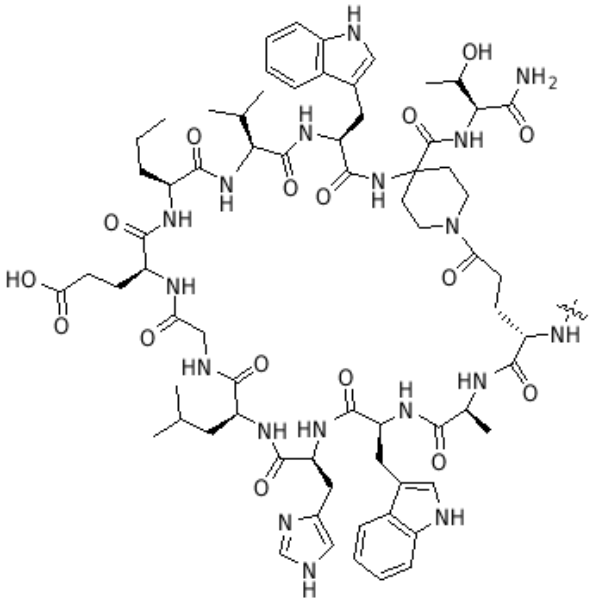
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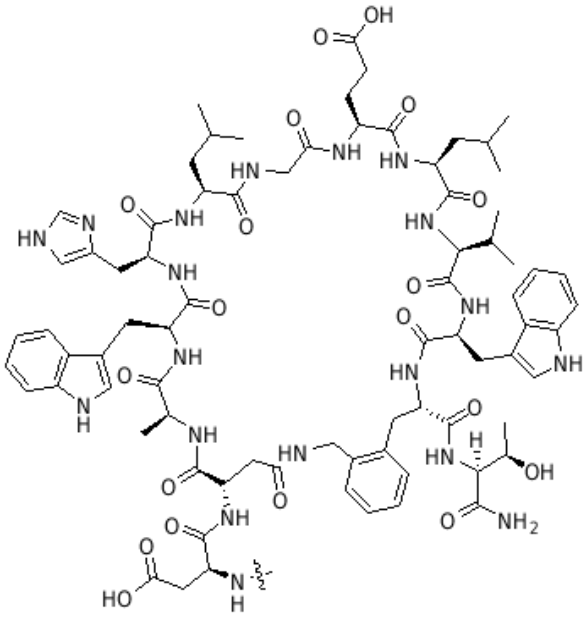
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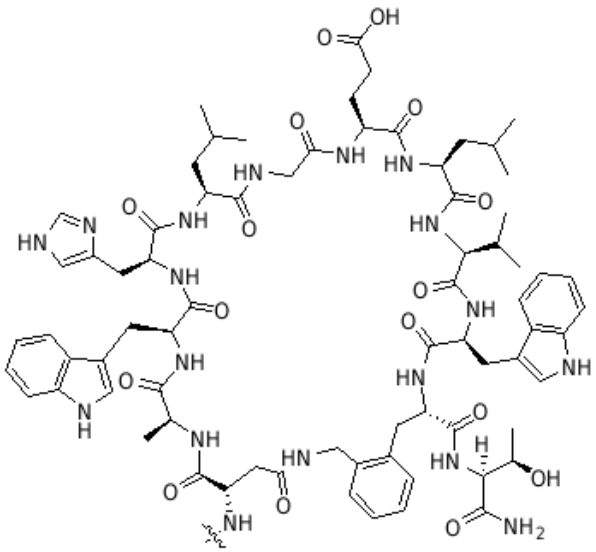
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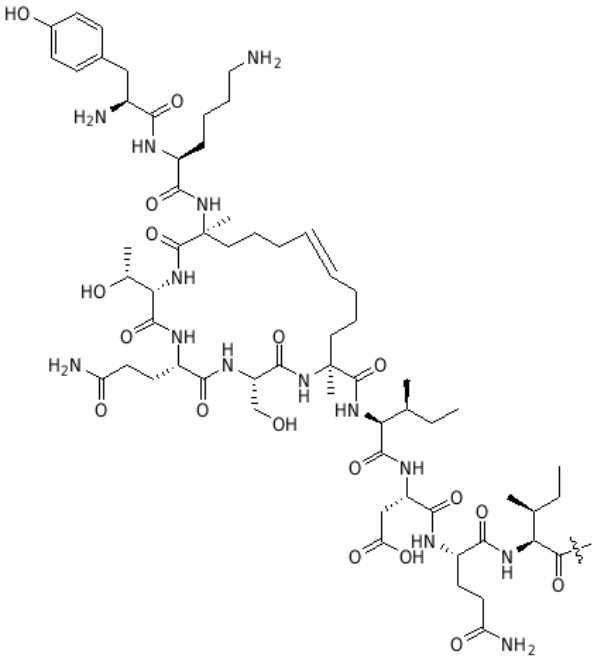
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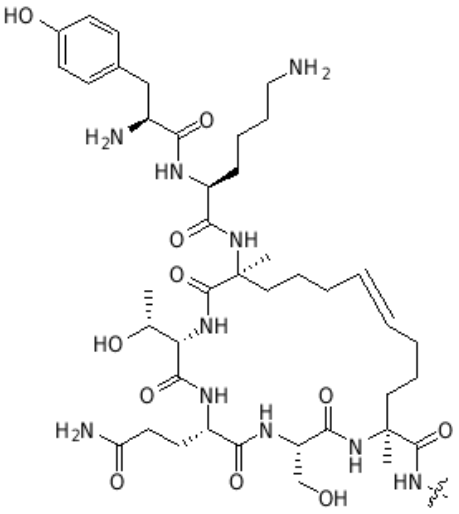
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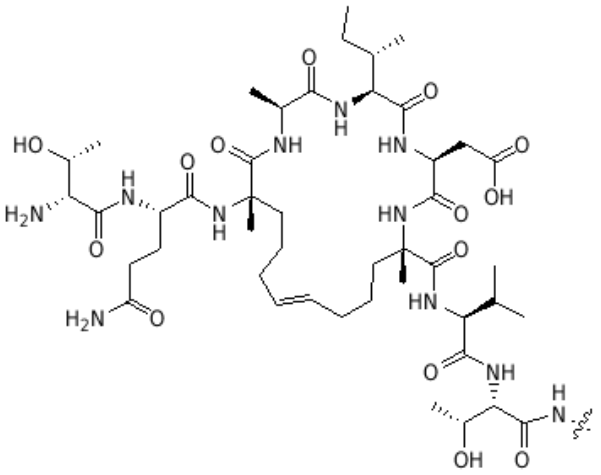


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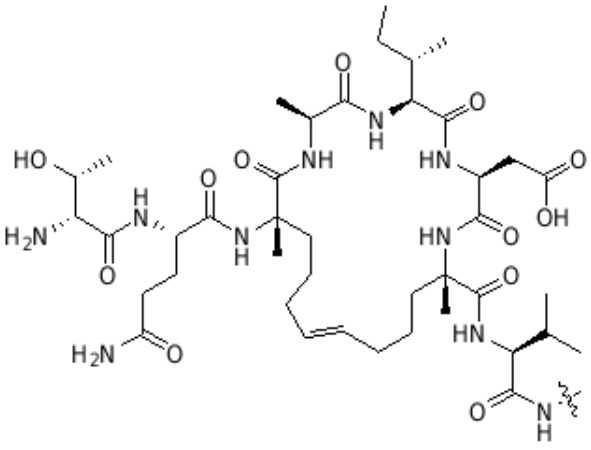
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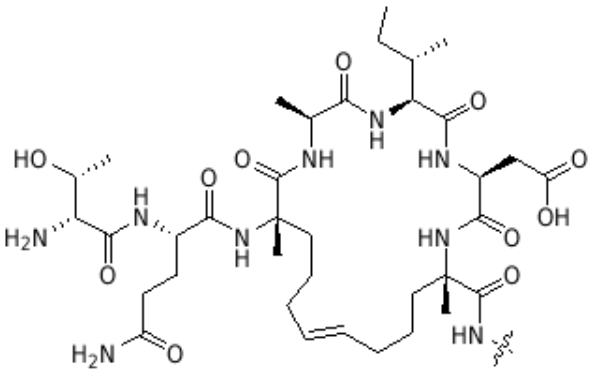


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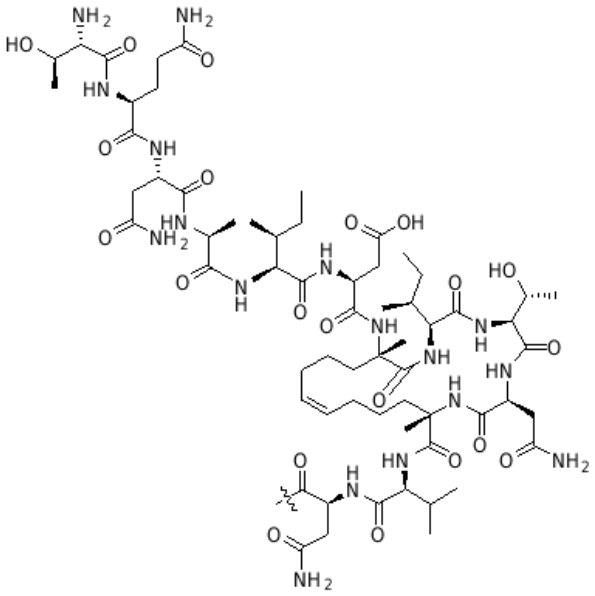
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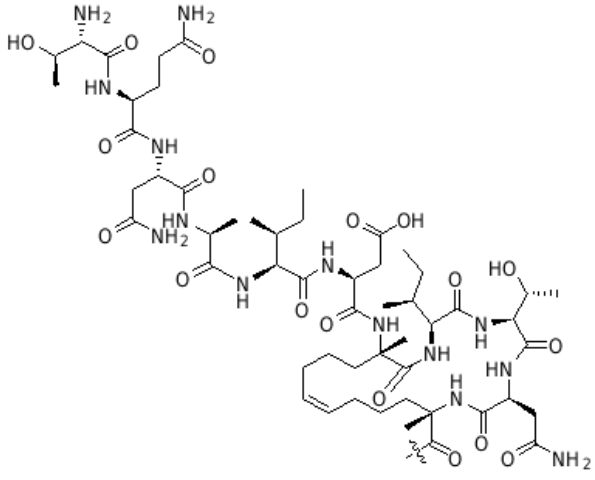
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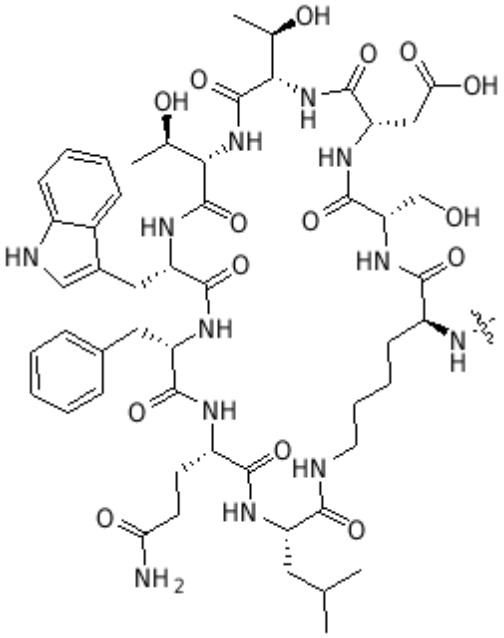
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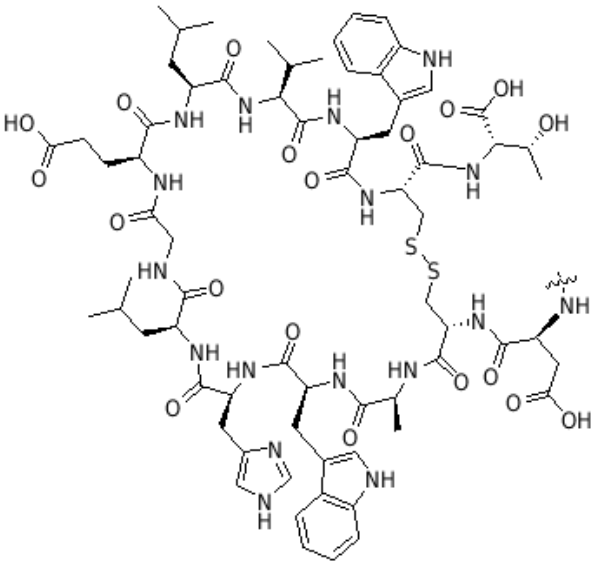
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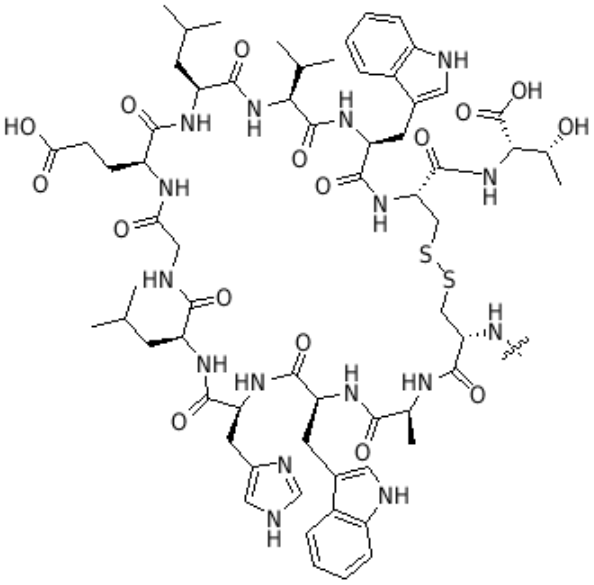
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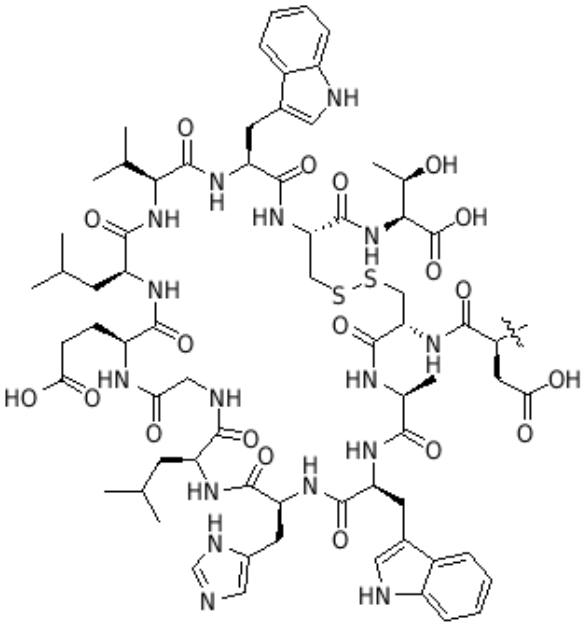
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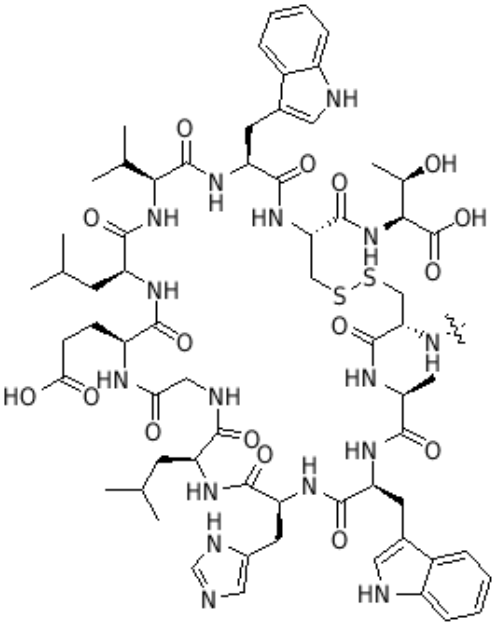
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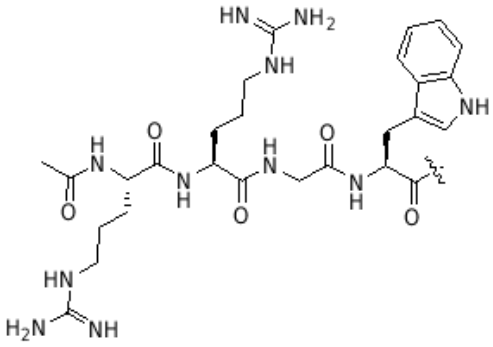


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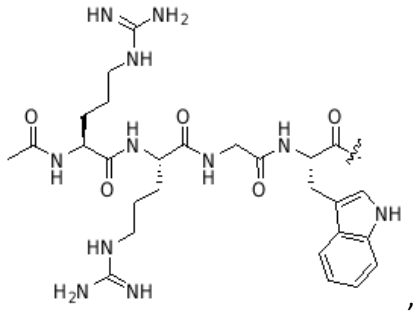


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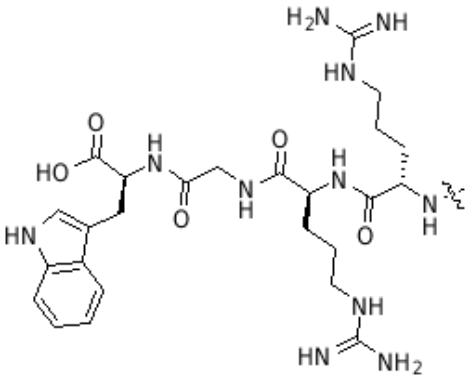
(b) the antibody binding moiety is



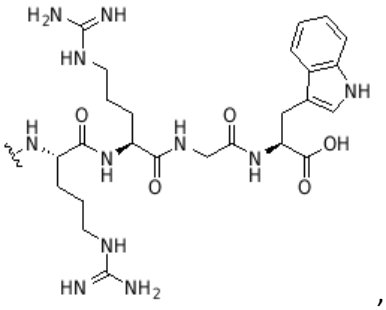
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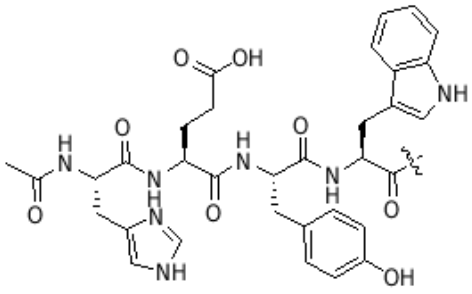
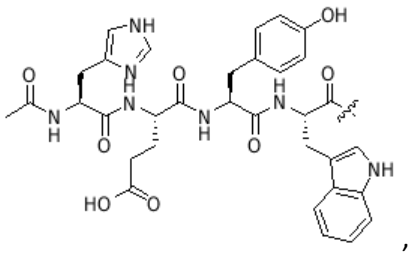
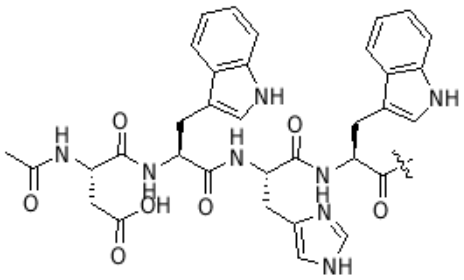
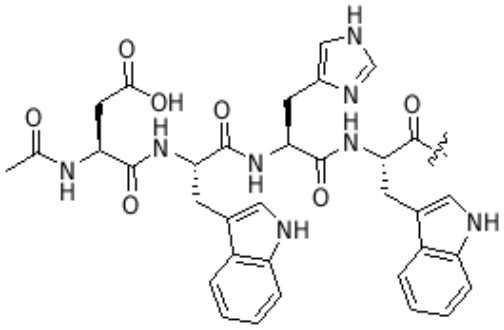
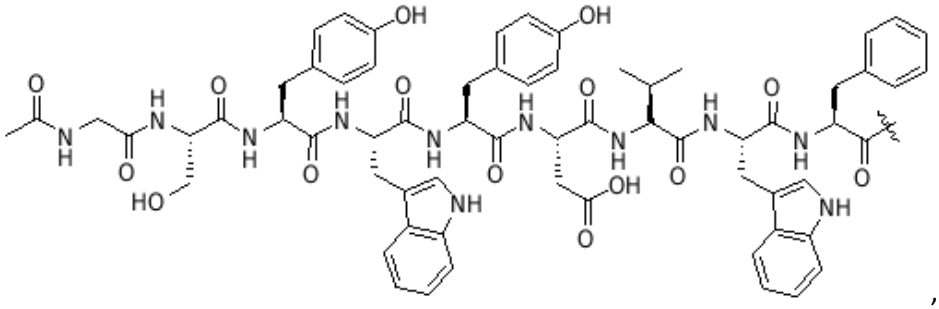
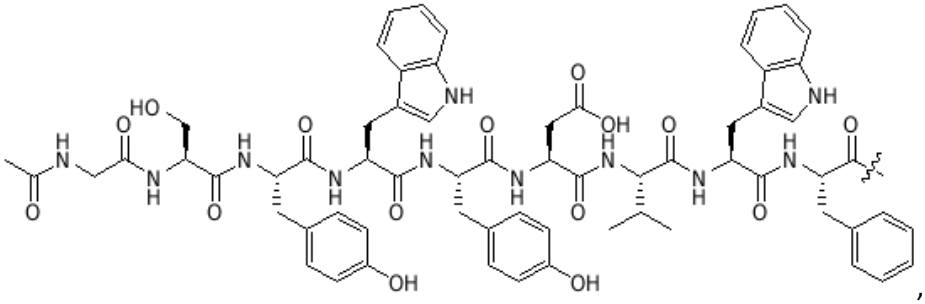
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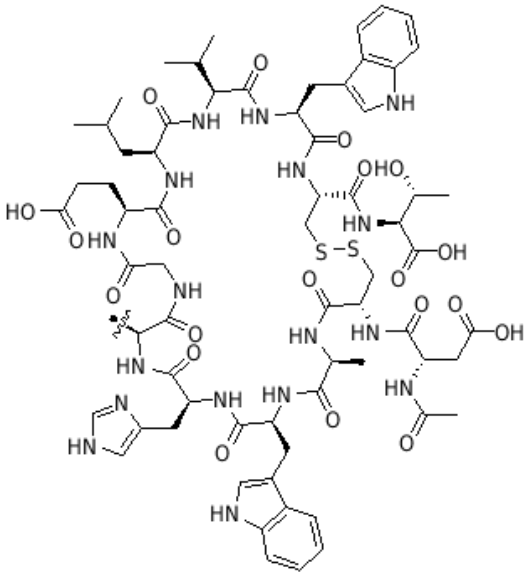
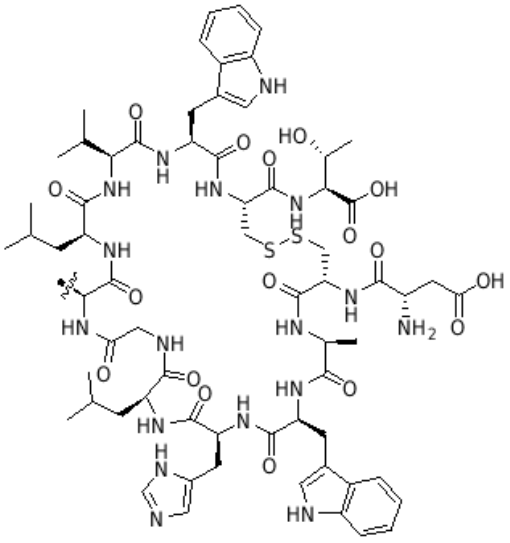
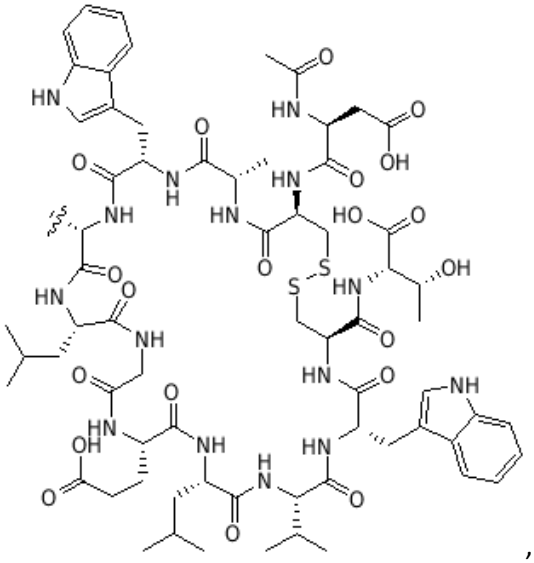
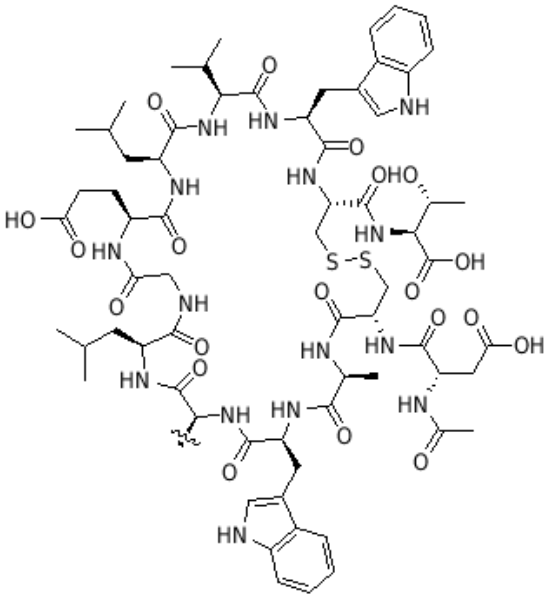


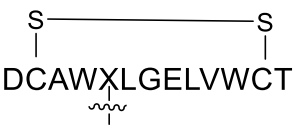
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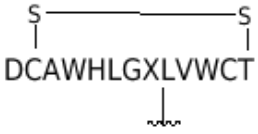

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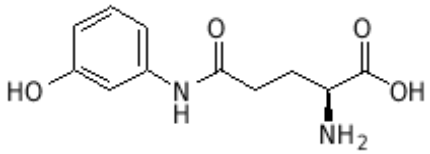
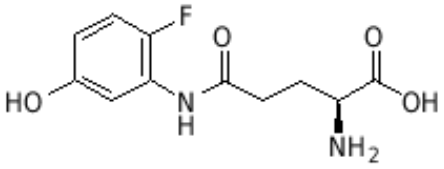
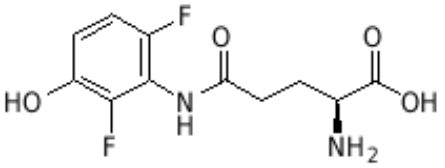
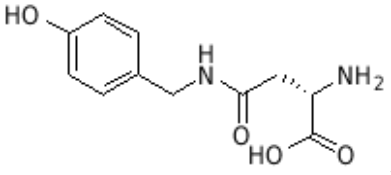
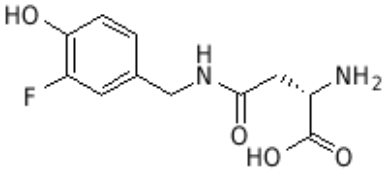
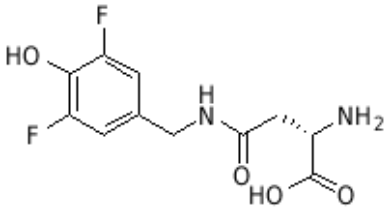
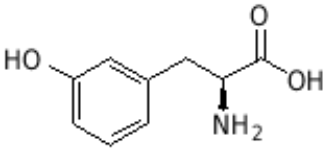
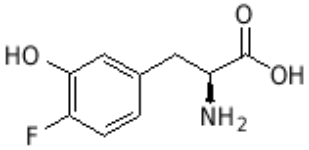
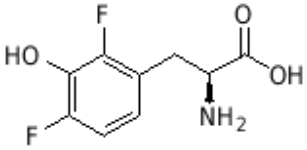
(c) the antibody binding moiety is or comprises


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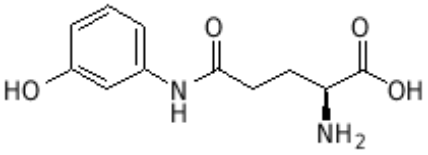
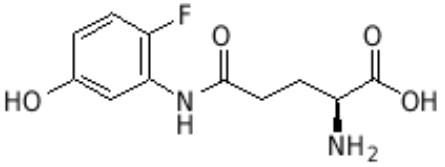
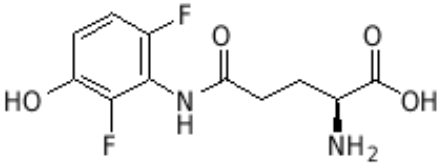

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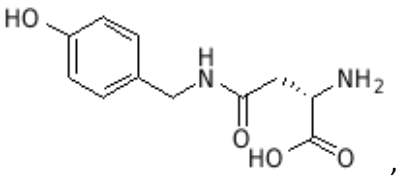
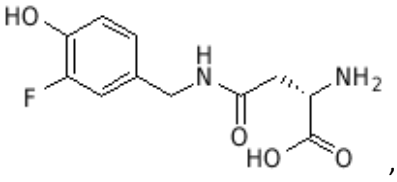
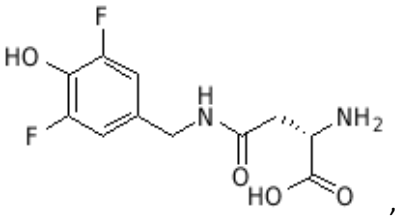
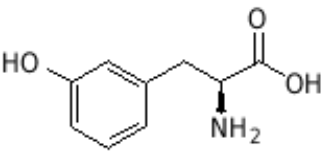
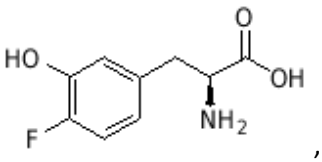
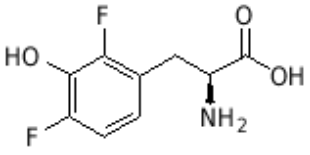

, or


, wherein X is an amino acid residue selected

from , , , , , , , , , lysine, aspartic acid, glutamic acid, and 2,4-diaminobutyric acid;

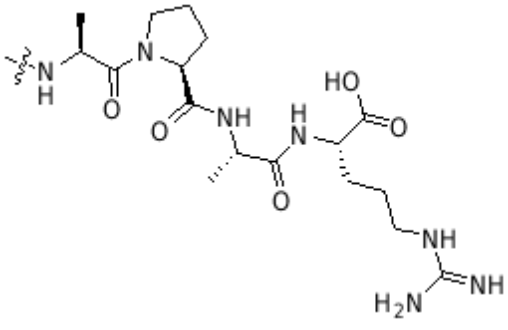
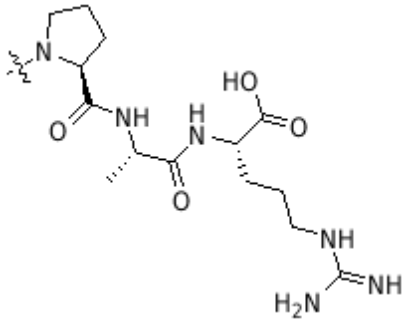
(d) the antibody binding moiety is , wherein X is lysine or arginine;

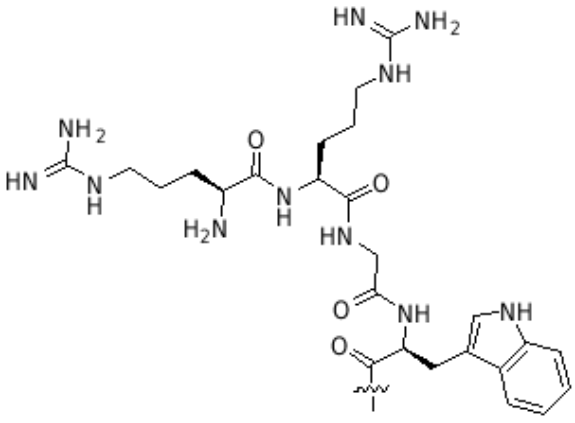
(e) the antibody binding moiety is or comprises DCAWXLGELVWCT, wherein X is an amino acid residue selected from , , ,


,

,

,

,

,

, lysine, aspartic acid, glutamic acid, and 2,4-diaminobutyric acid; or

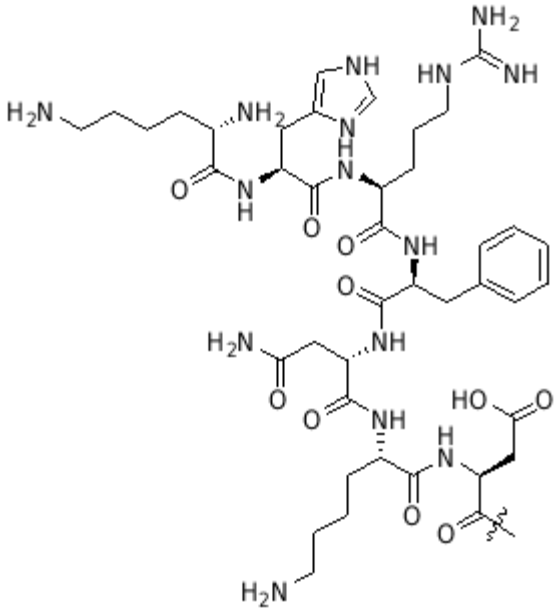
(f) the antibody binding moiety is or comprises DCAWXLGELVWCT, wherein the two cysteine residues optionally form a disulfide bond, and X is an amino acid residue.

2. The compound or salt thereof of claim 1, wherein the antibody binding moiety is

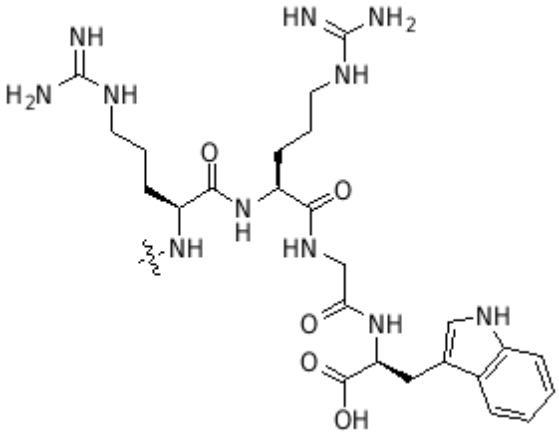

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(A-2),



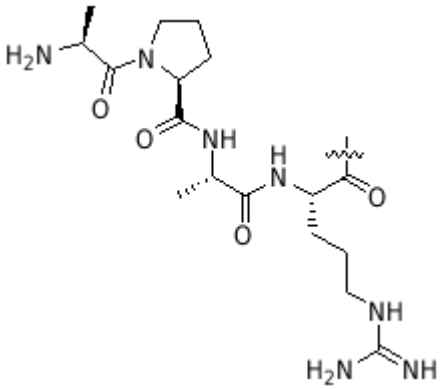
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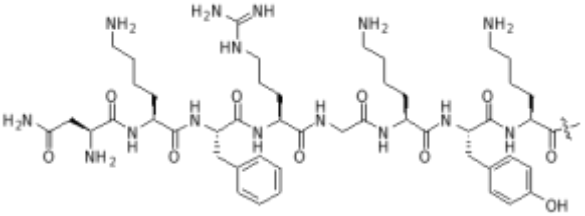
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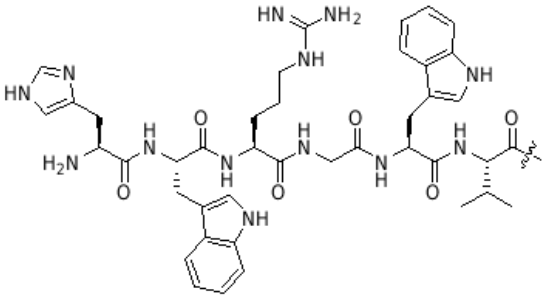
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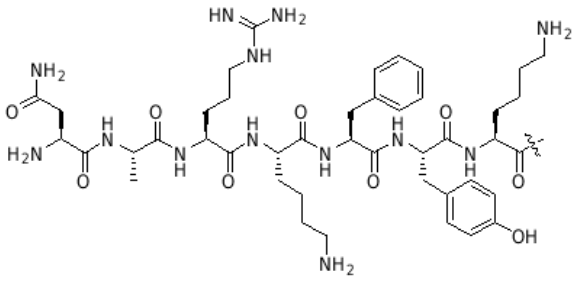
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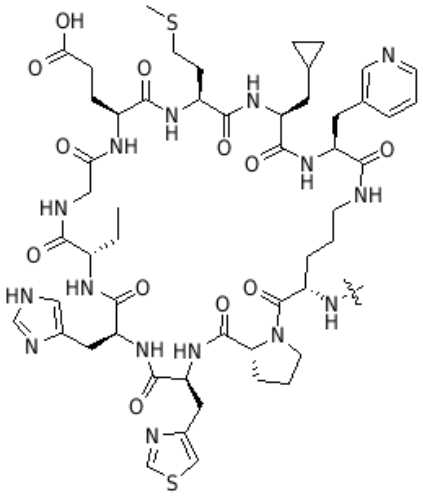
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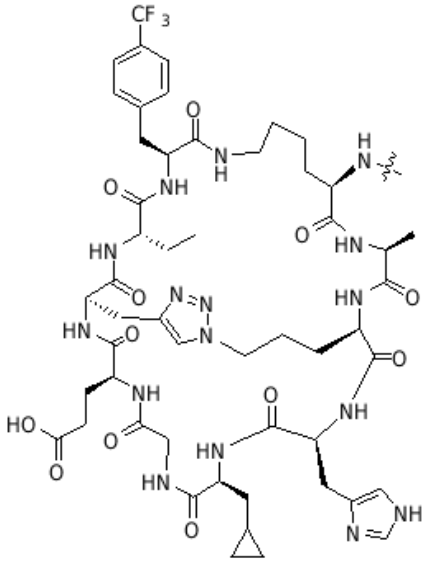
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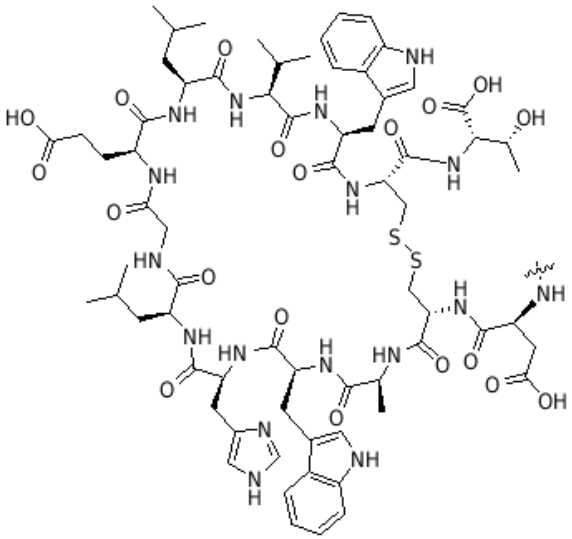
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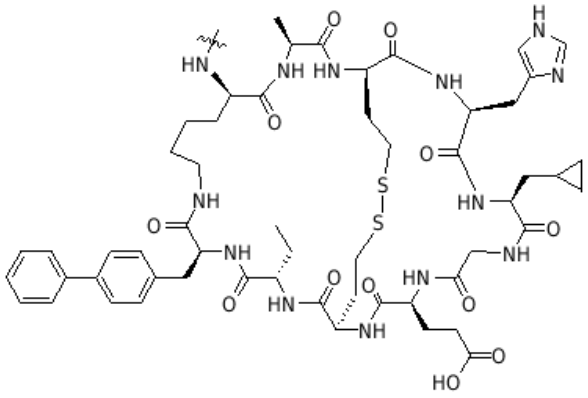
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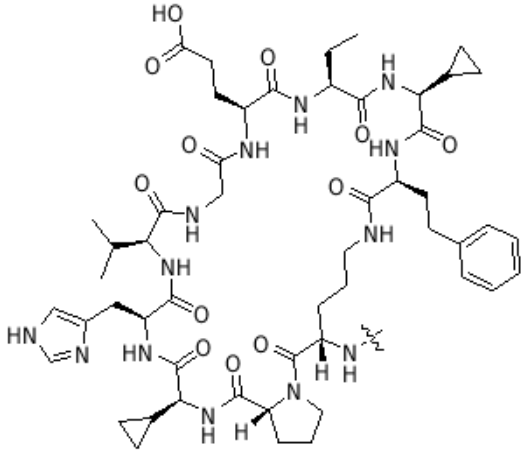
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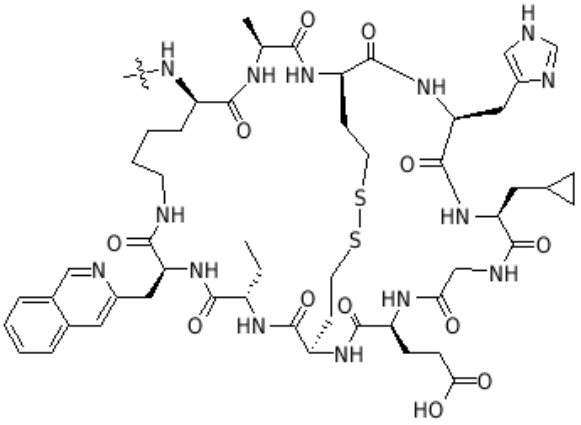
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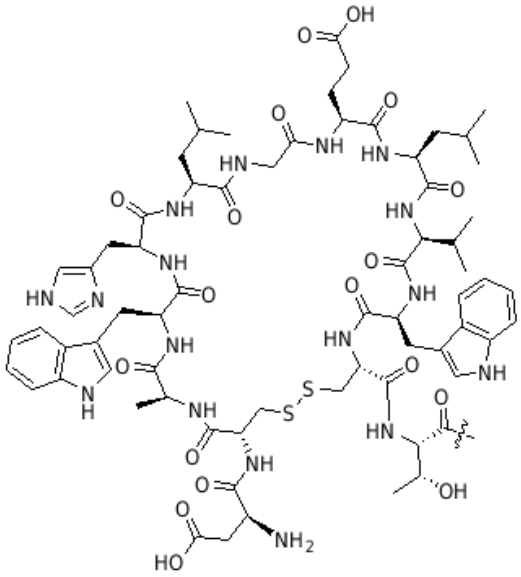
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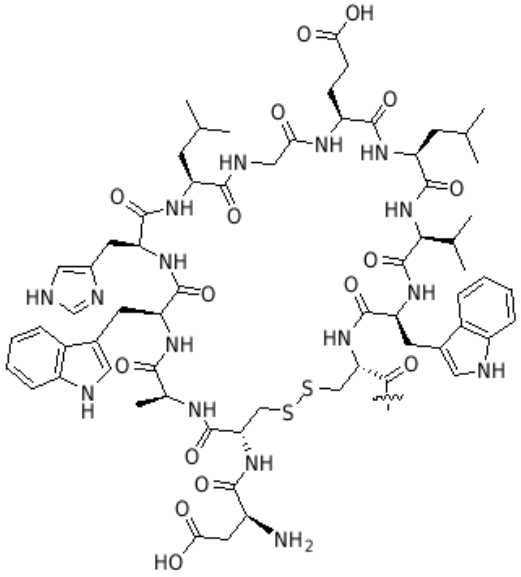
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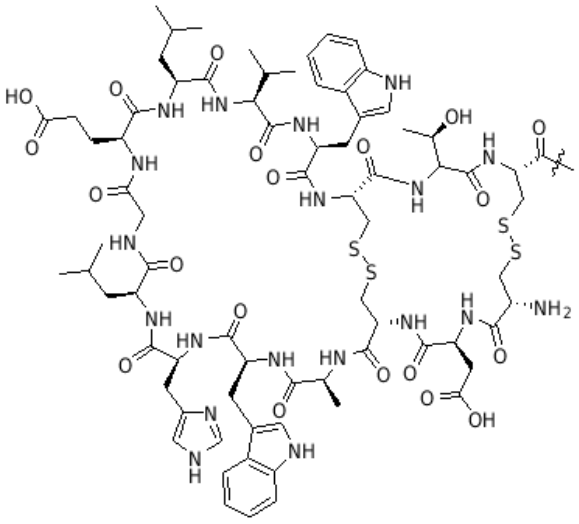
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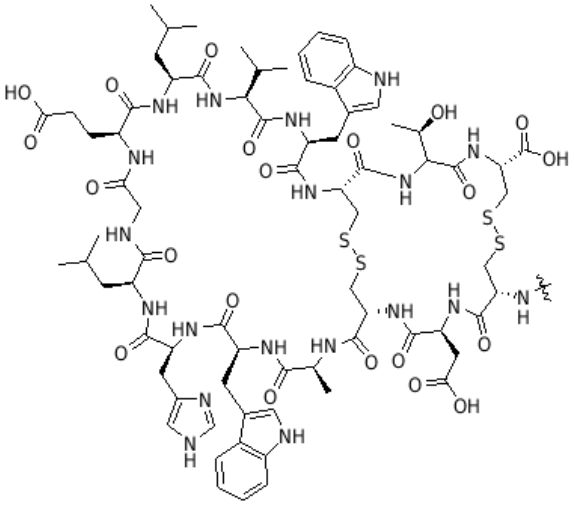
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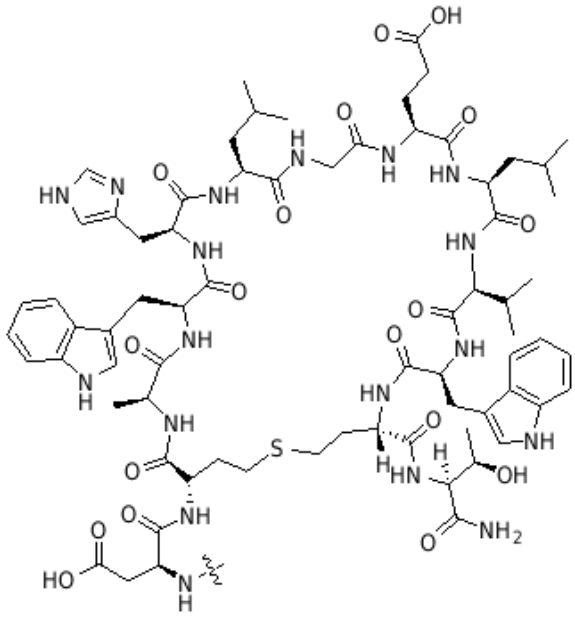
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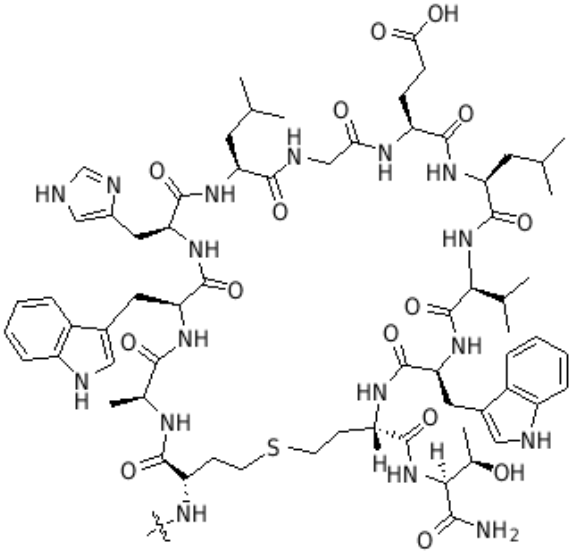
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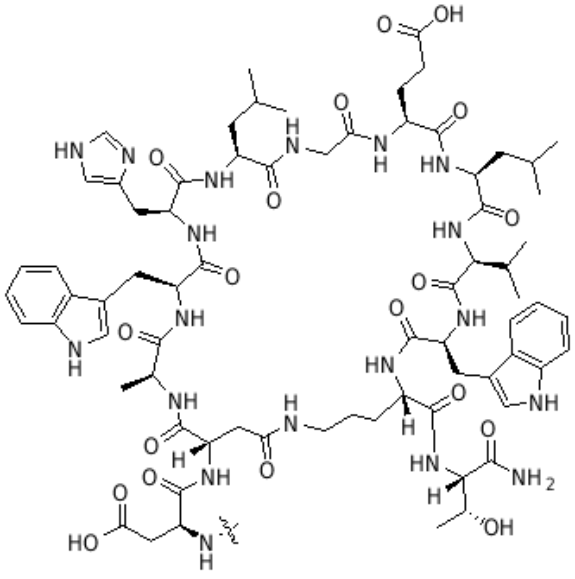
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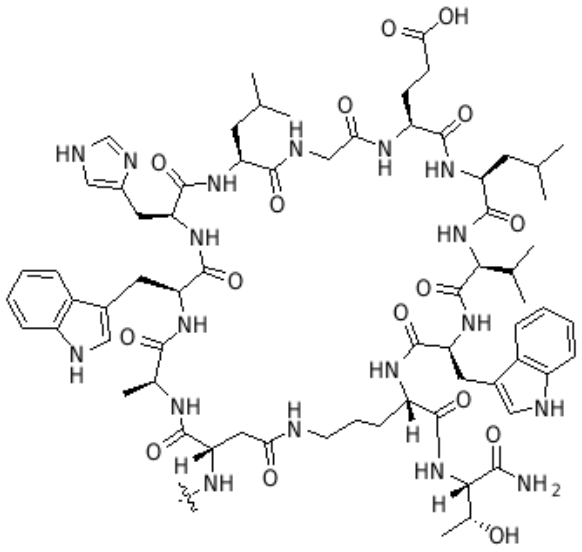
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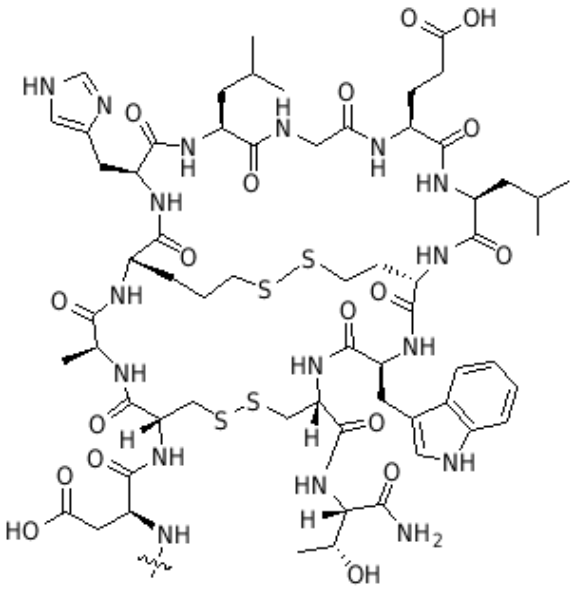
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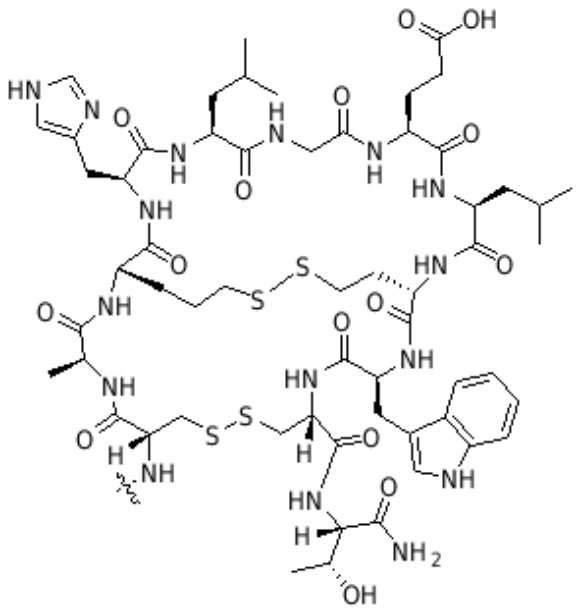
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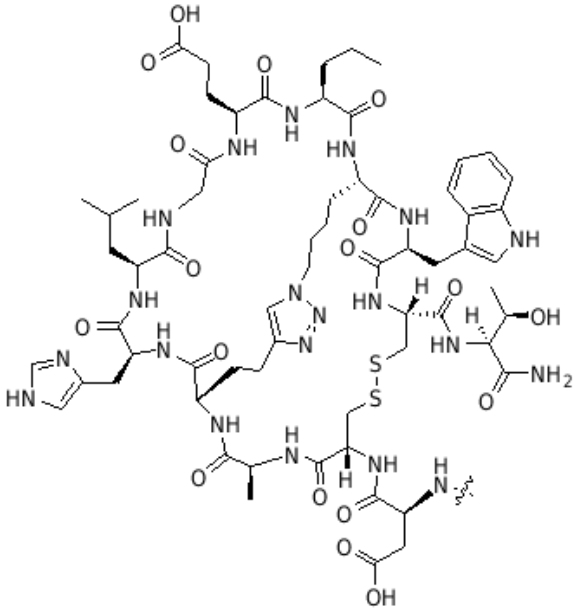
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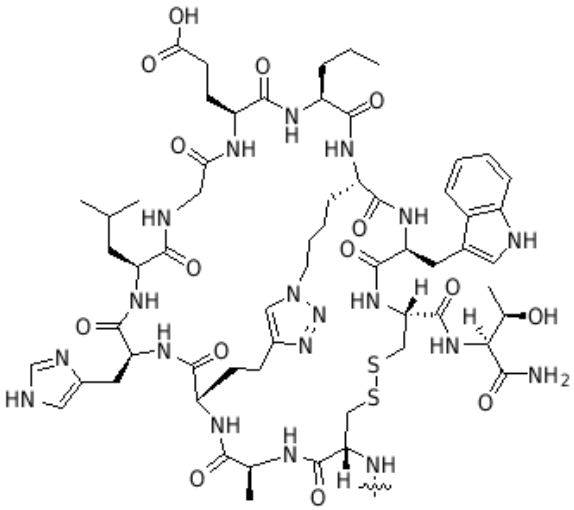
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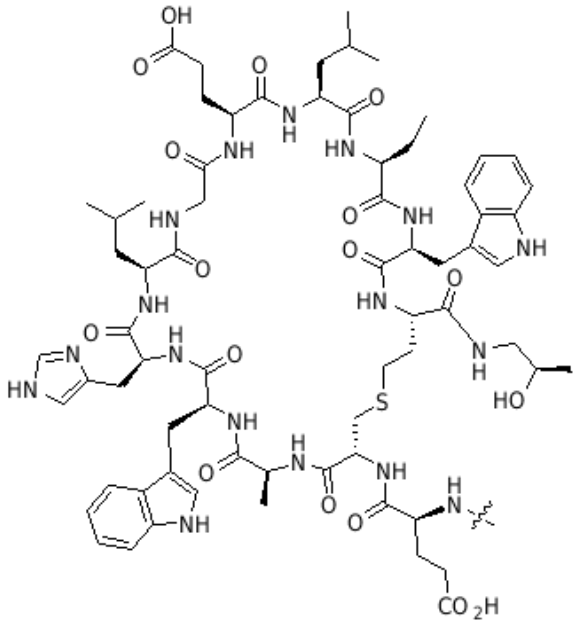
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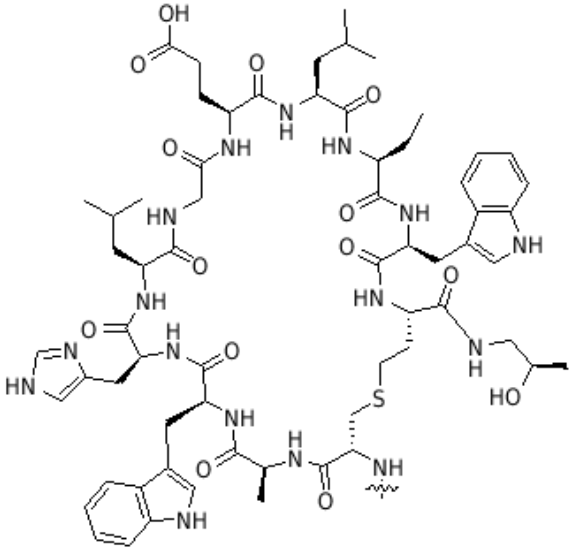
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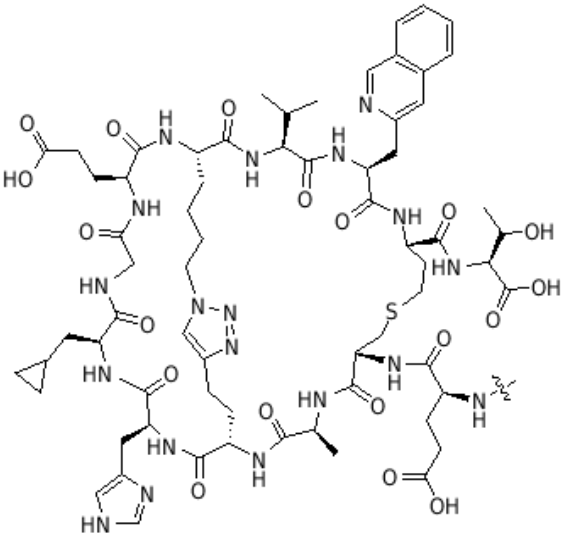
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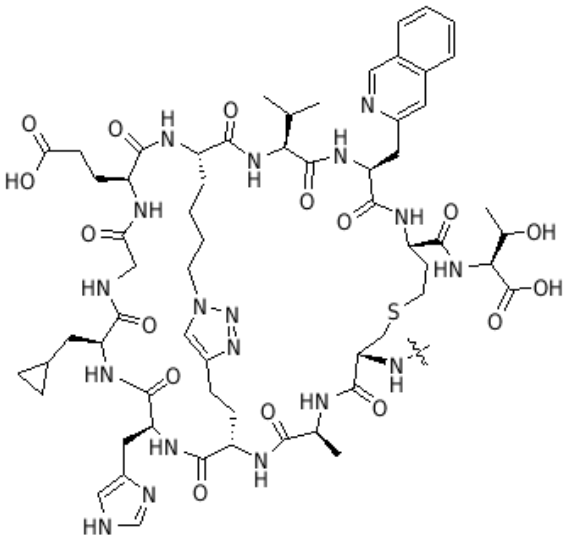
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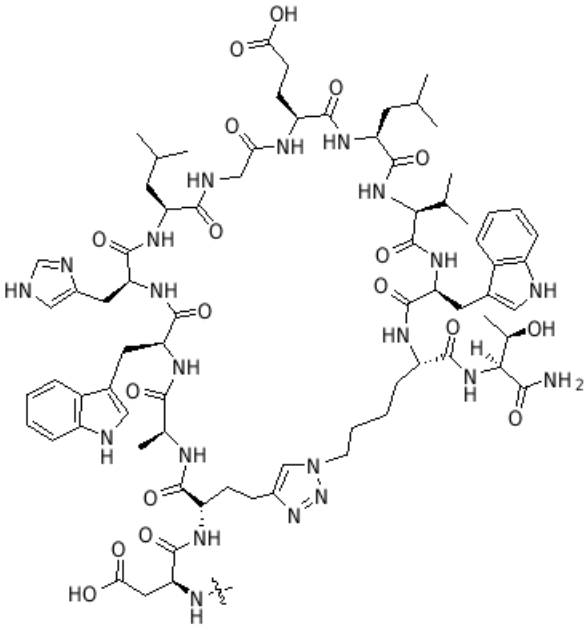
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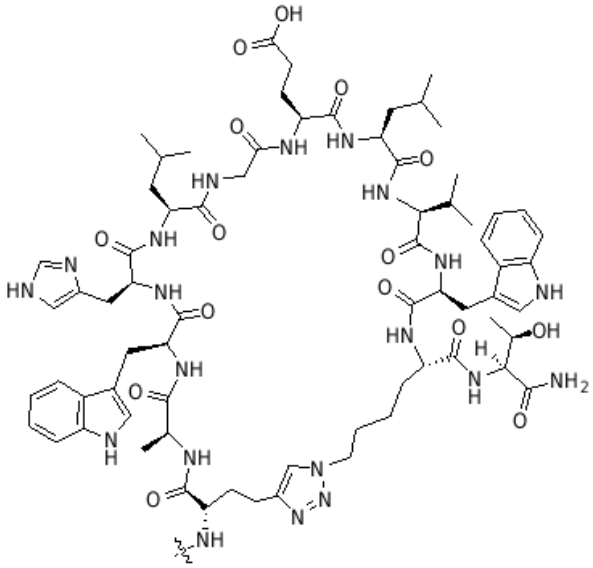
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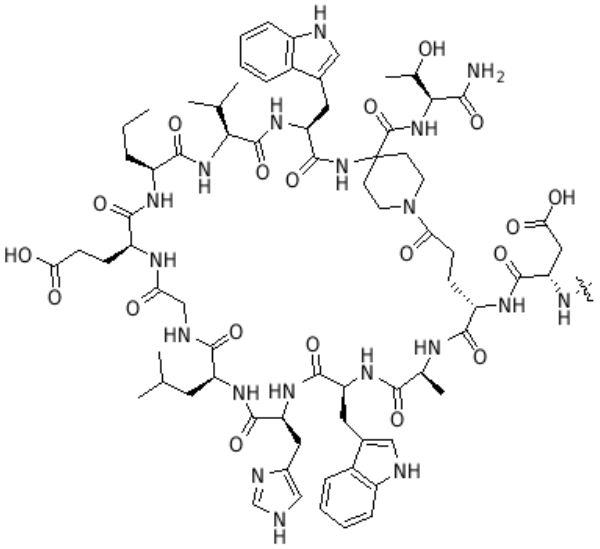
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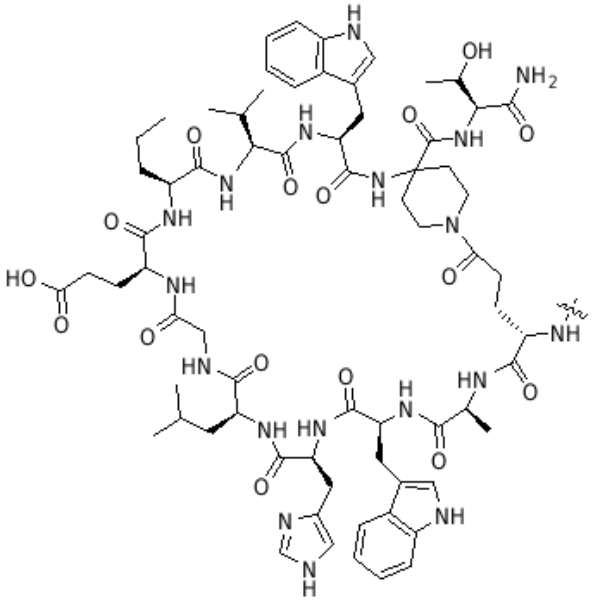
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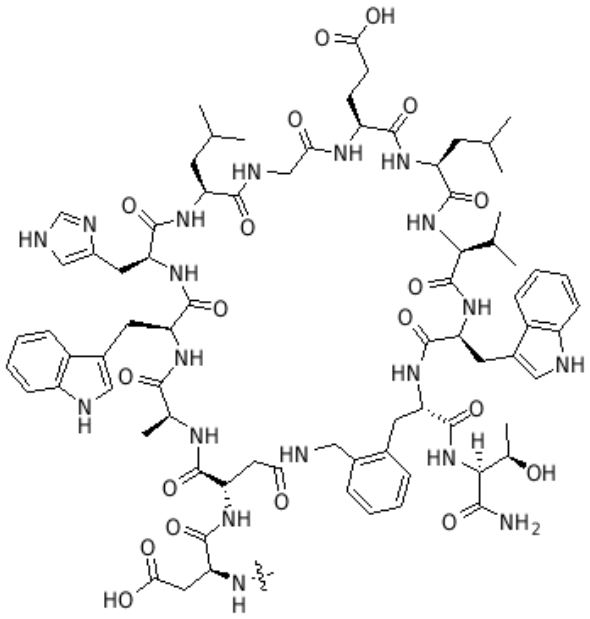
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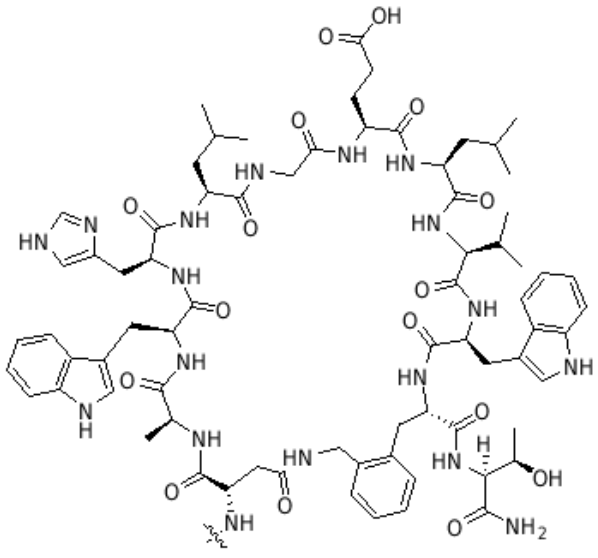
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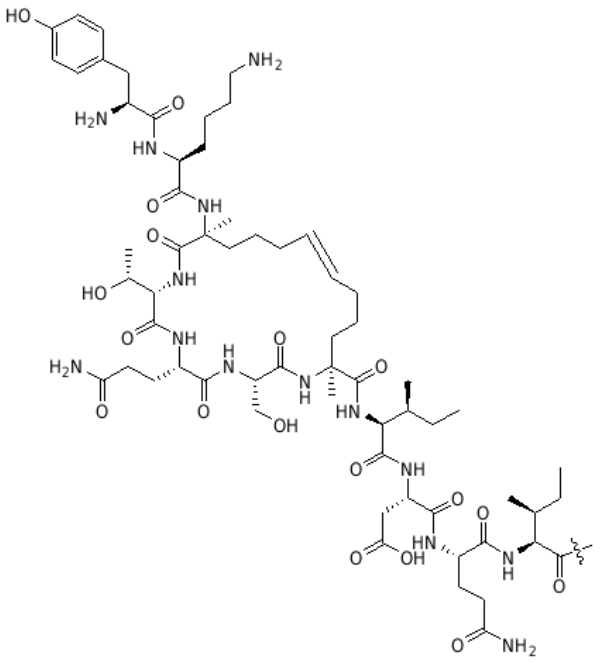


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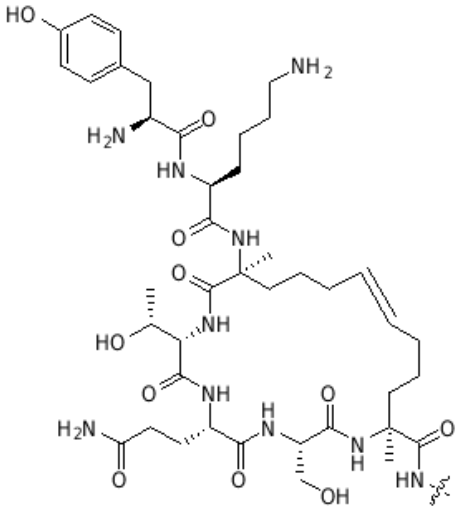


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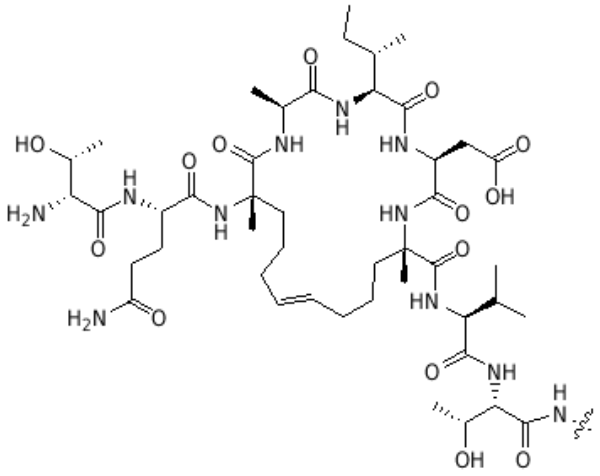
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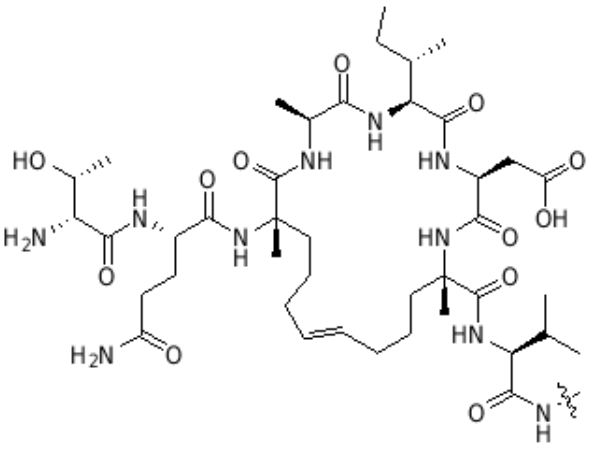
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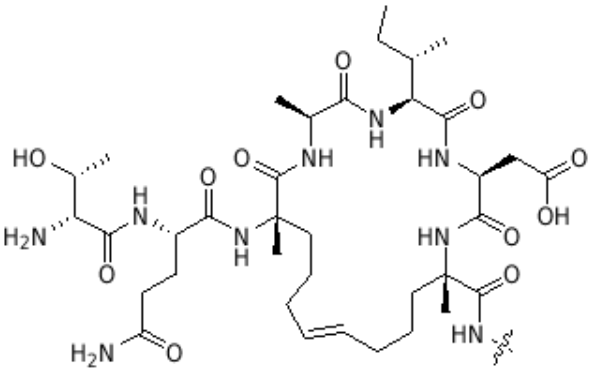
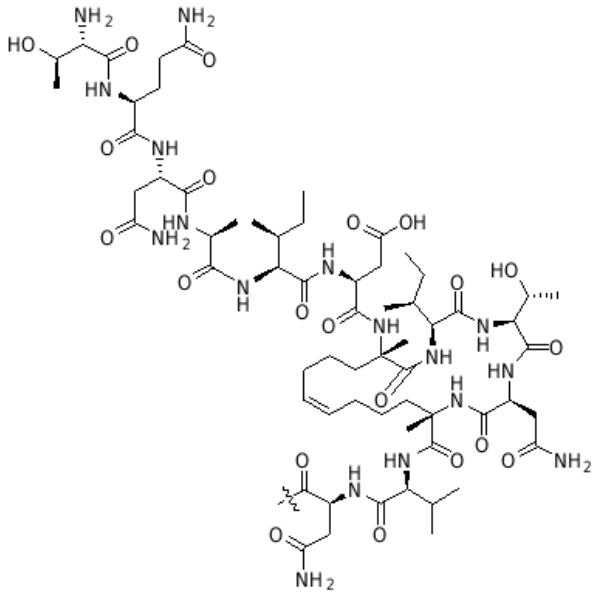
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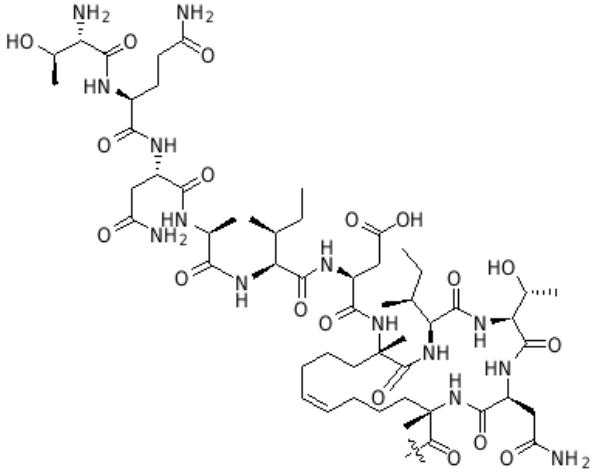
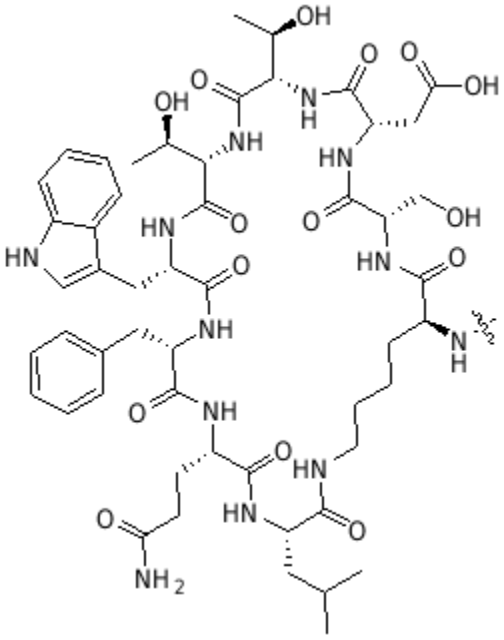


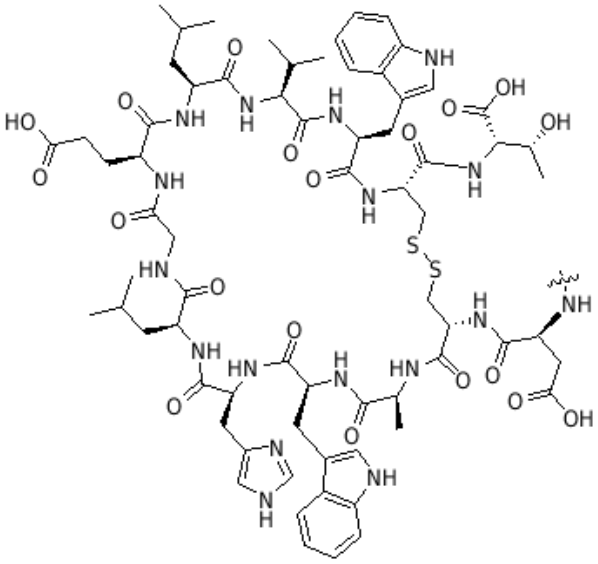
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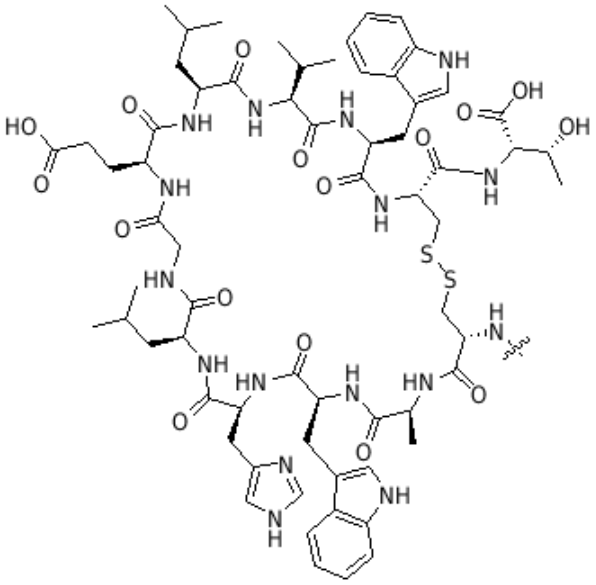


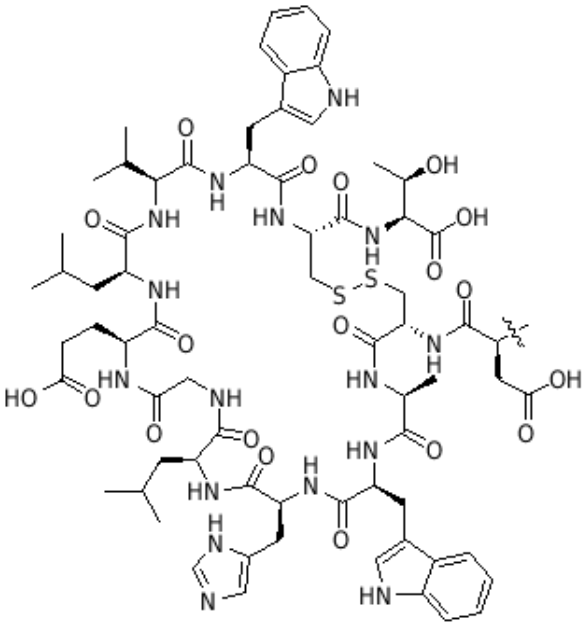
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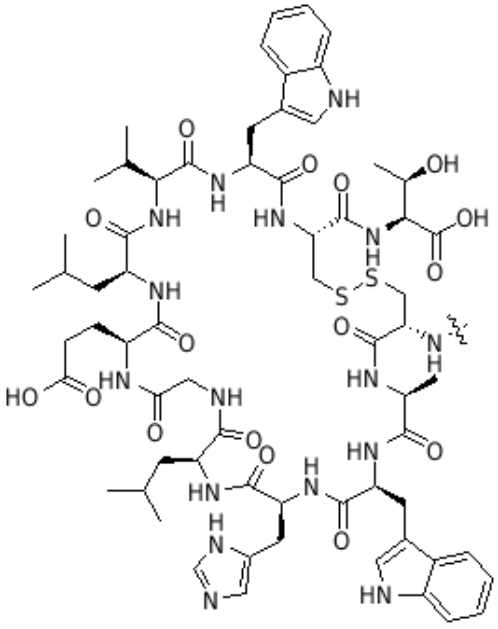
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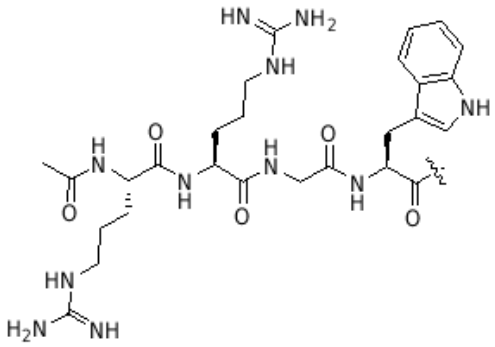
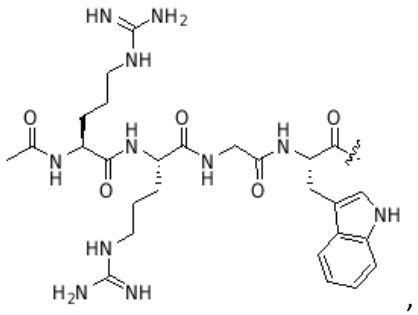
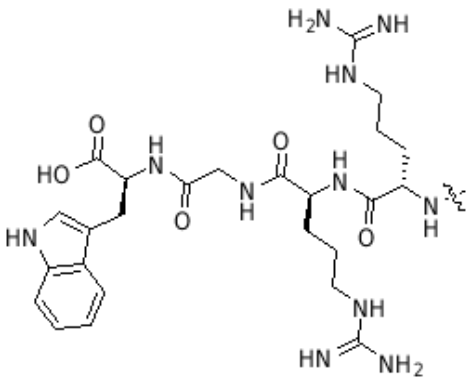
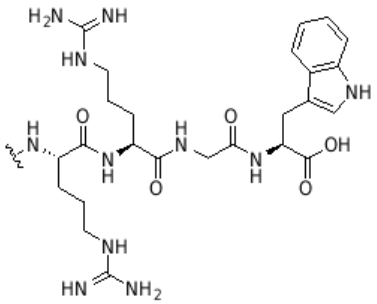
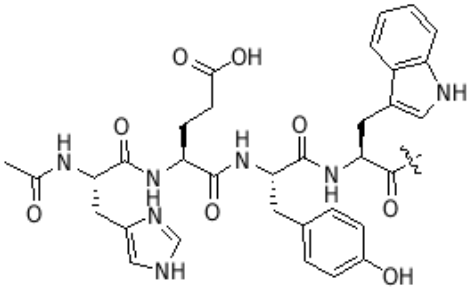
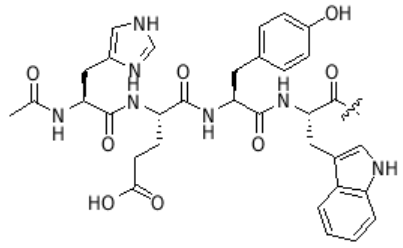
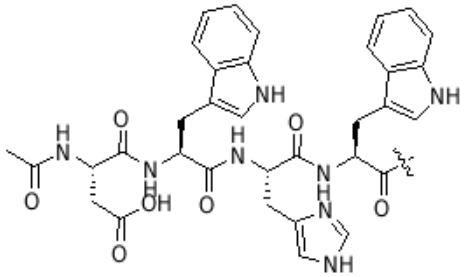
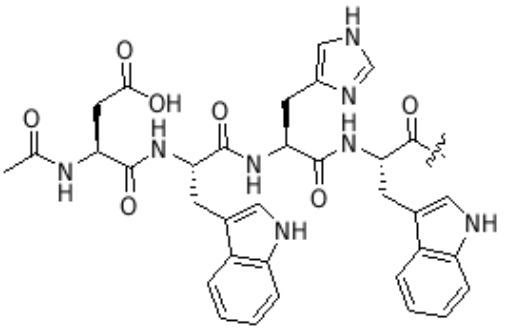
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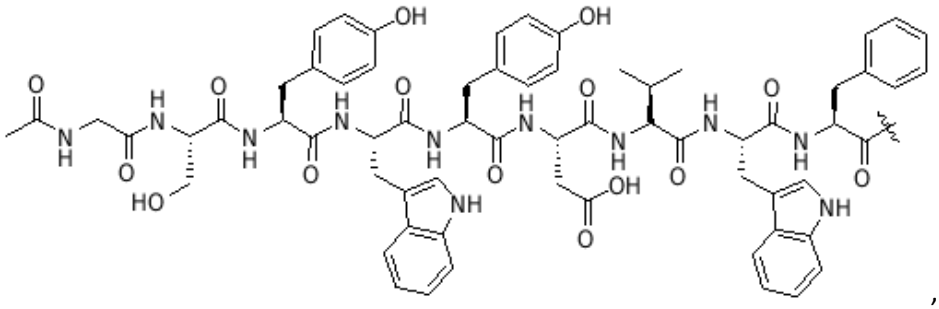
(A-46), 

(A-47), 

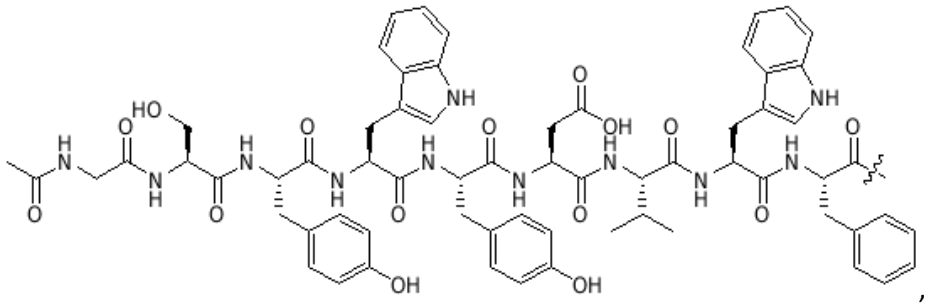
(A-48), or (A-49).

3. The compound or salt thereof of claim 1, wherein the antibody binding moiety is:

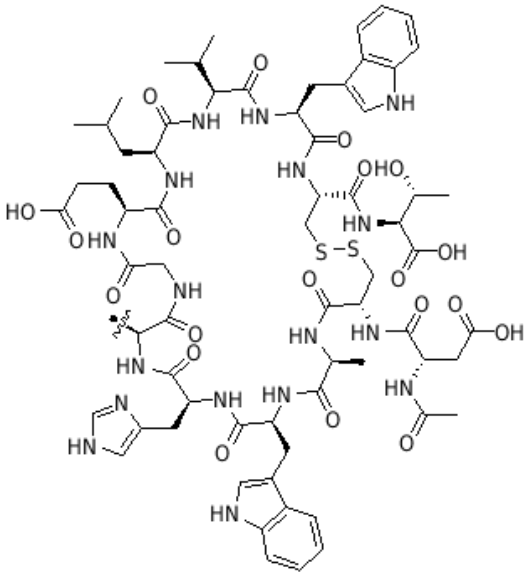

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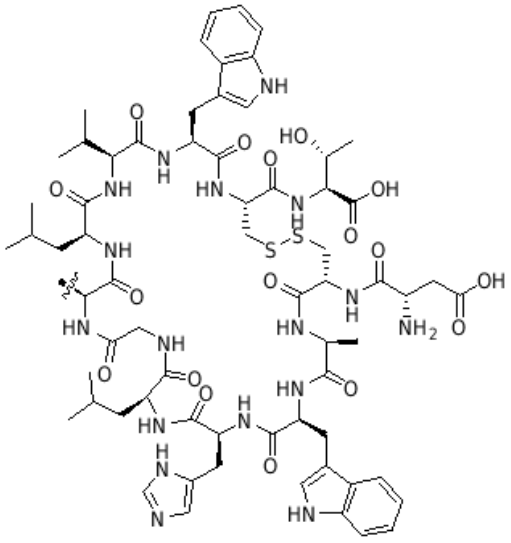
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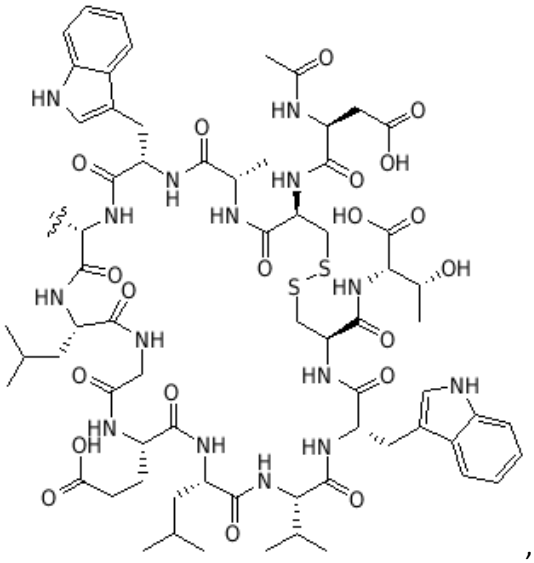
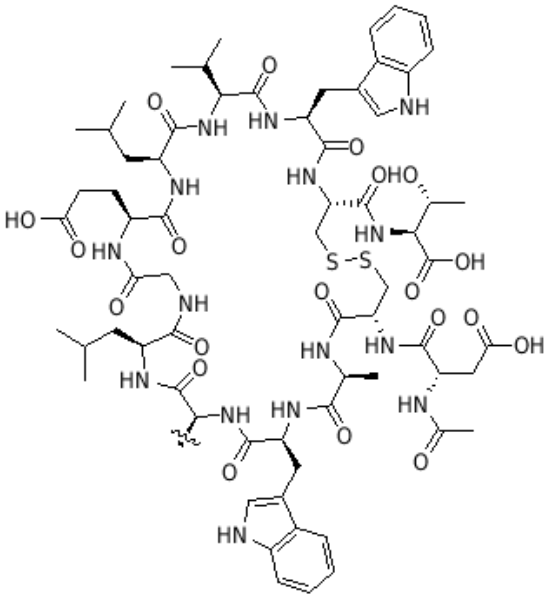
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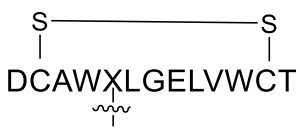
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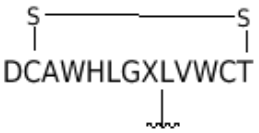

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4. The compound or salt thereof of claim 1, wherein the antibody binding moiety is or comprises

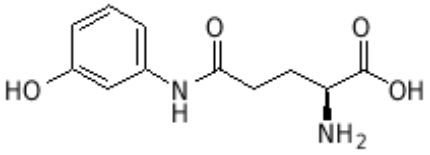


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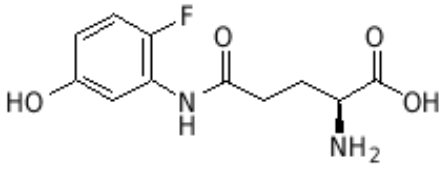
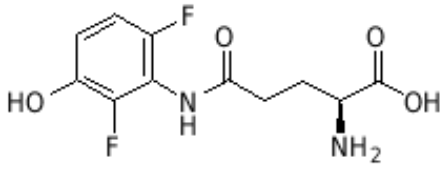
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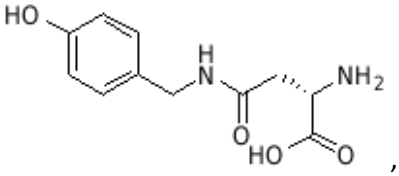
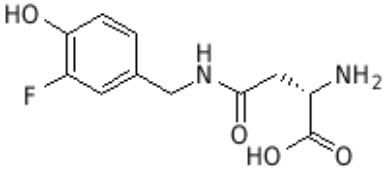
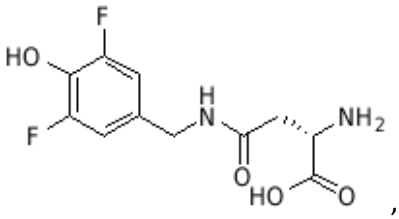
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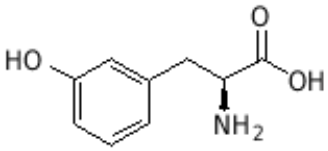
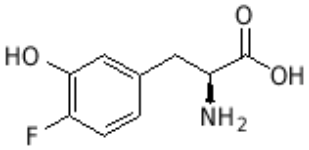
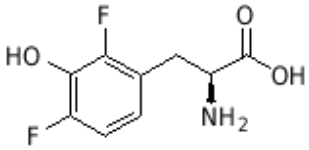
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wherein X is an amino acid residue selected from


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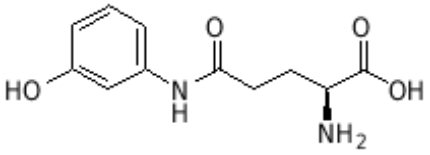

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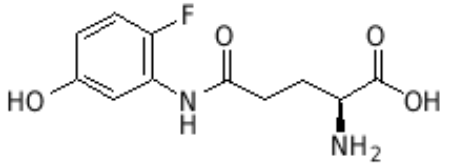
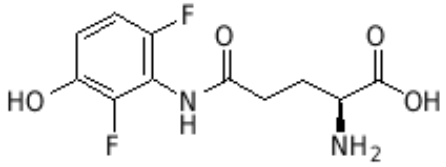



, lysine, aspartic acid, glutamic acid, and 2,4-diaminobutyric acid.

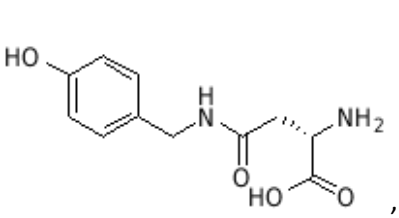
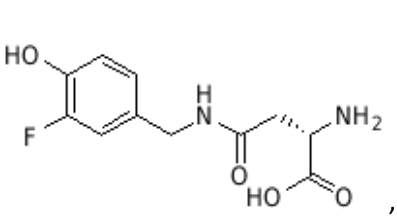
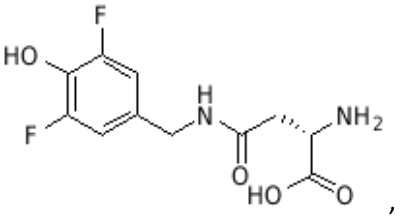
5. The compound or salt thereof of claim 1, wherein the antibody binding moiety is

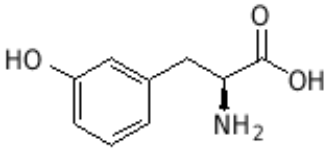
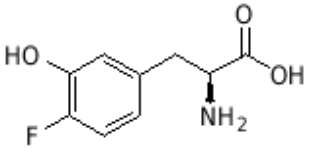
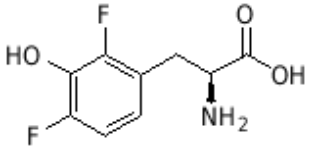

, wherein X is lysine or arginine.

6. The compound or salt thereof of claim 1, wherein the antibody is or comprises DCAWXLGELVWCT, wherein X is an amino acid residue selected from


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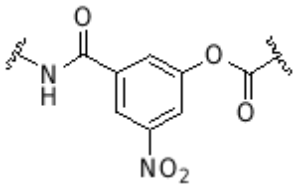
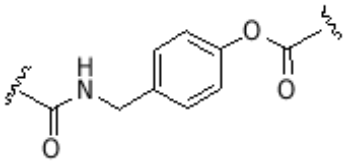
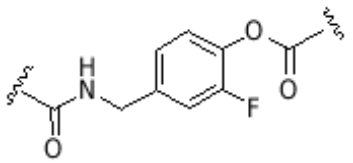
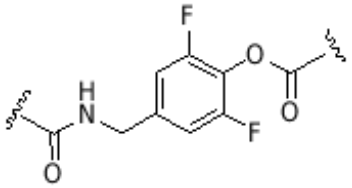
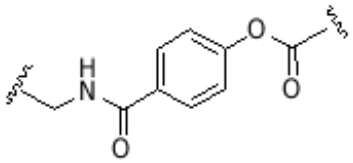
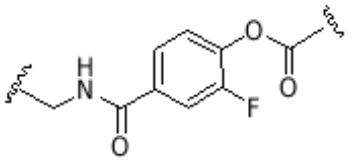
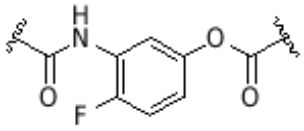
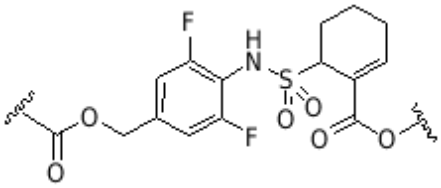
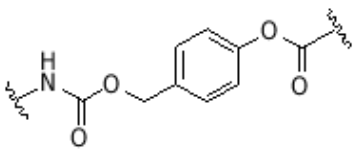

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, lysine, aspartic acid, glutamic acid, and 2,4-diaminobutyric acid.

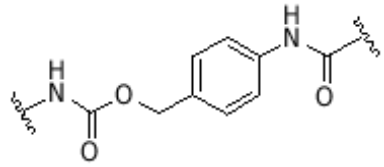
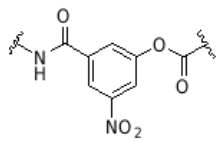
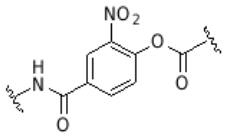
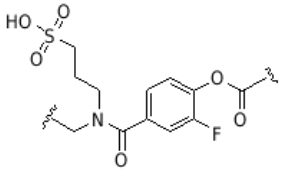
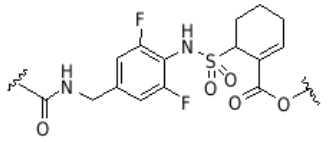
7. The compound or salt thereof of claim 1, wherein the antibody binding moiety is or comprises DCAWXLGELVWCT, wherein the two cysteine residues optionally form a disulfide bond, and X is an amino acid residue.

8. The compound or salt thereof of any one of claims 1-7, wherein the moiety of interest is the therapeutic agent.

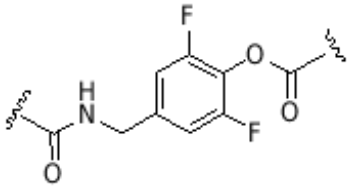
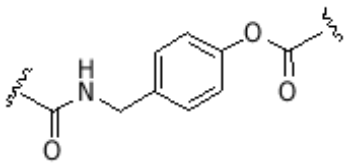
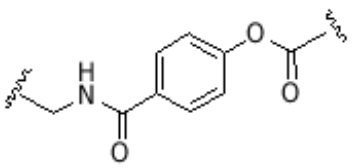
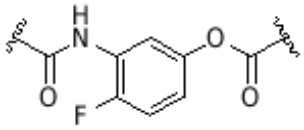
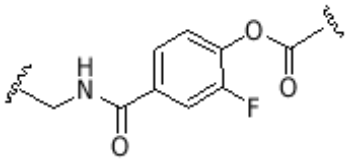
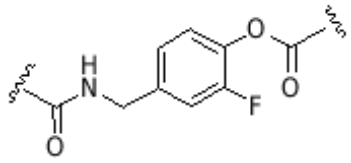
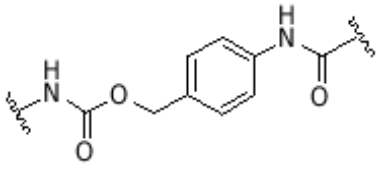
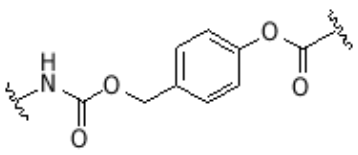
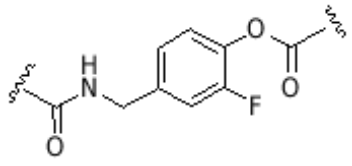
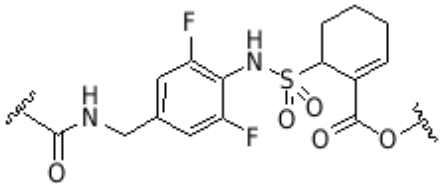
9. The compound or salt thereof of any one of claims 1-7, wherein:
   the therapeutic agent is a maytansinoid agent, an auristatin agent, or a transcription inhibitor agent;
   the anti-cancer agent is a DNA injuring agent, an antimetabolite, an enzyme inhibitor, a DNA intercalating agent, a DNA cleaving agent, a topoisomerase inhibitor, a DNA binding inhibitor, a tubulin binding inhibitor, a cytotoxic nucleoside, a platinum compound, a bacteriotoxin, or a phytotoxin; or
   the moiety of interest is fluorescein isothiocyanate, exatecan or a derivative thereof, a calicheamicin agent, a duocarmycin agent, an amatoxin agent, monomethyl auristatin-E, or monomethyl auristatin-F.

10. The compound or salt thereof of any one of claims 1-9, wherein the reactive group is selected from:


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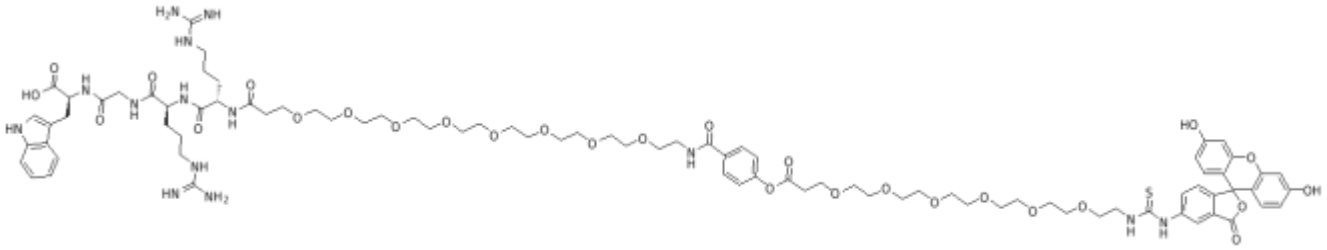
11. The compound or salt thereof of any one of claims 1-9, wherein the reactive group is selected from:










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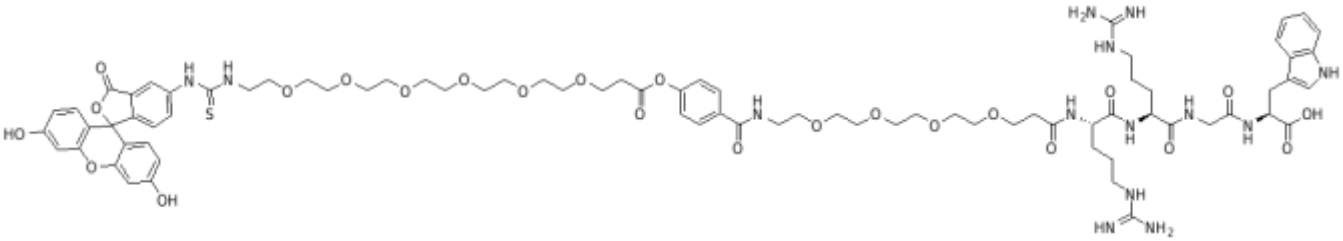
.

12. The compound or salt thereof of any one of claims 1-11, wherein the antibody binding moiety binds an antibody comprising an IgG heavy chain comprising K246 or K248 and brings the reactive group in proximity with K246 or K248 of the IgG heavy chain to enable a reaction between K246 or K248 and the reactive group that results in attachment of a moiety comprising L^{RM}–MOI to K246 or K248 and expulsion of the group containing a target binding moiety from the compound.

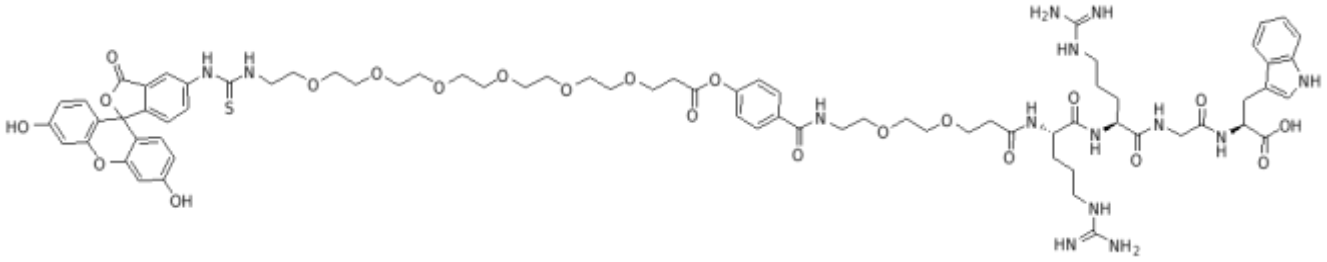
13. The compound or salt thereof of claim 1, wherein the compound is one of the following compounds or salt thereof:



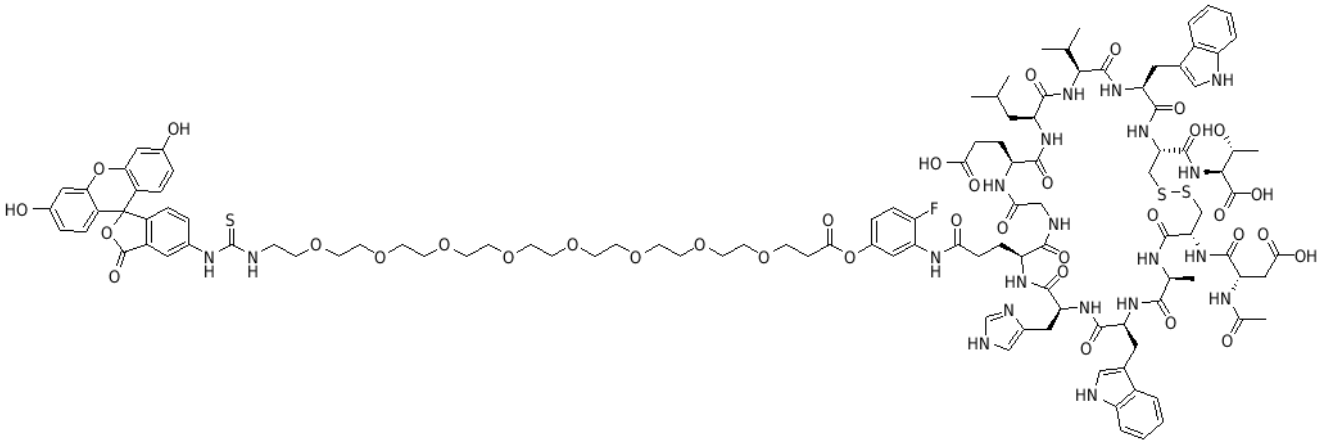
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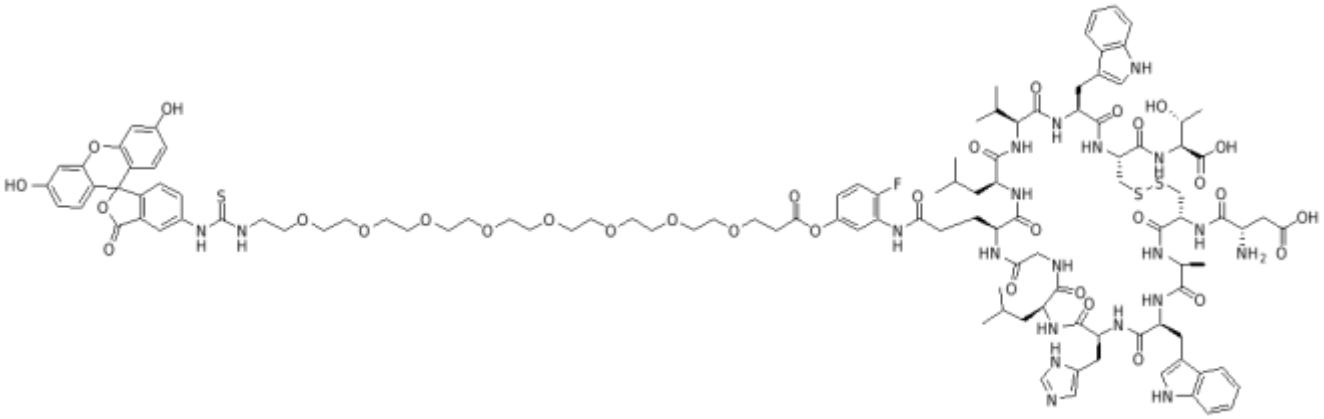
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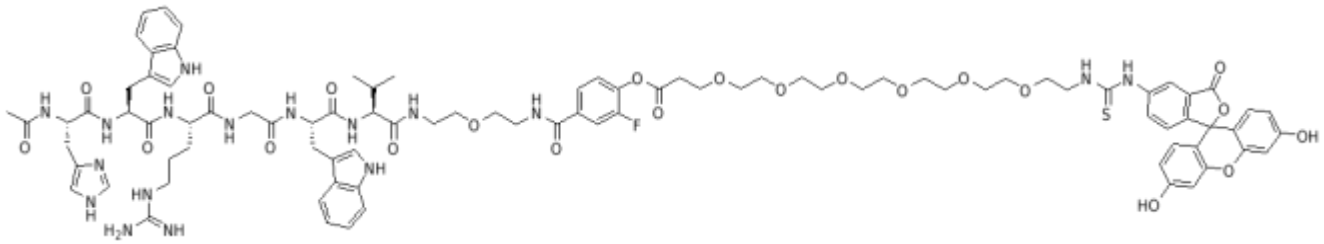
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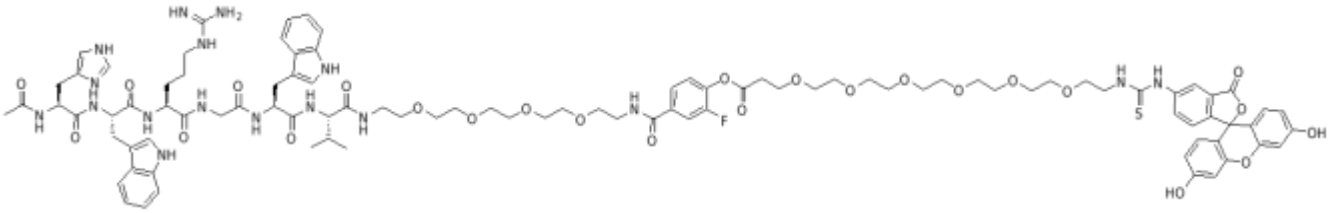
(I-24),



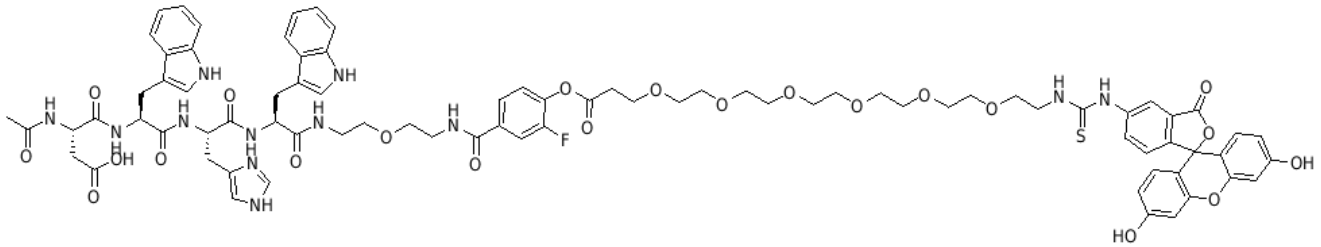
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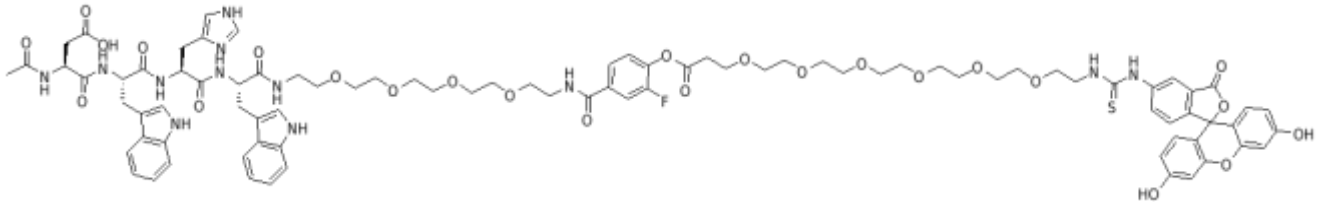
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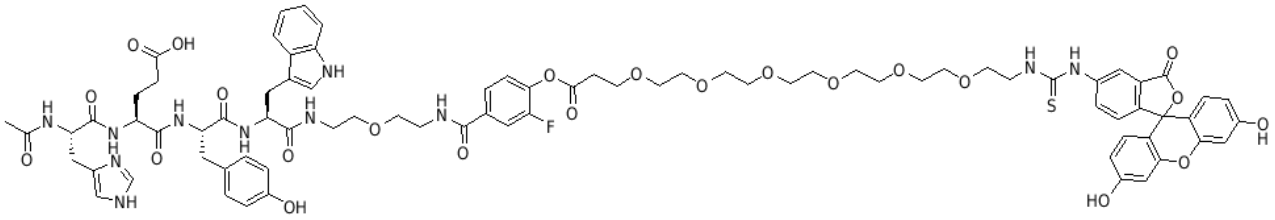
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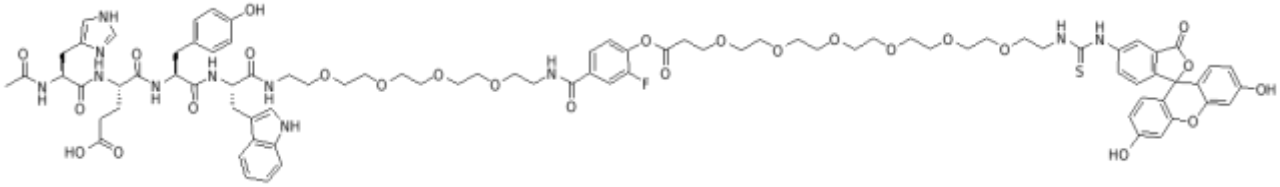
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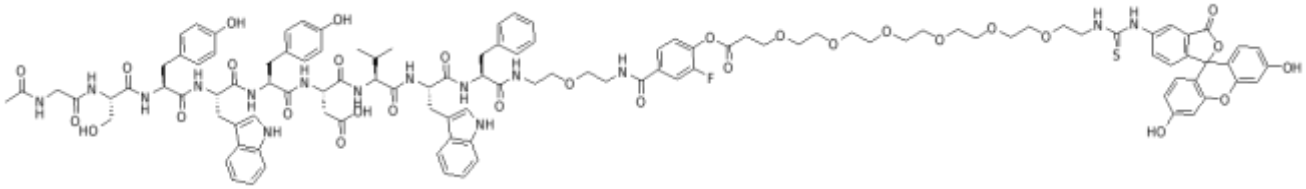
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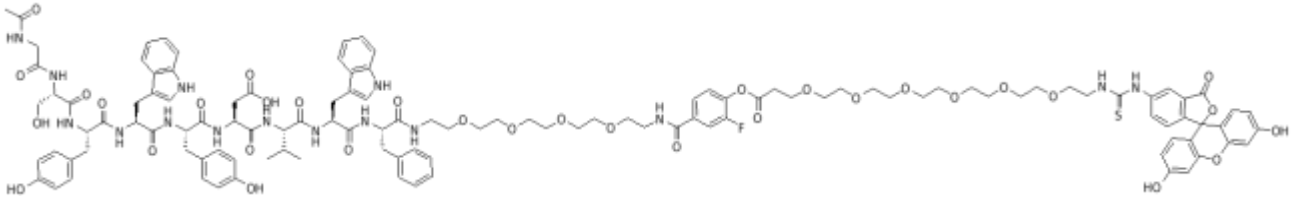
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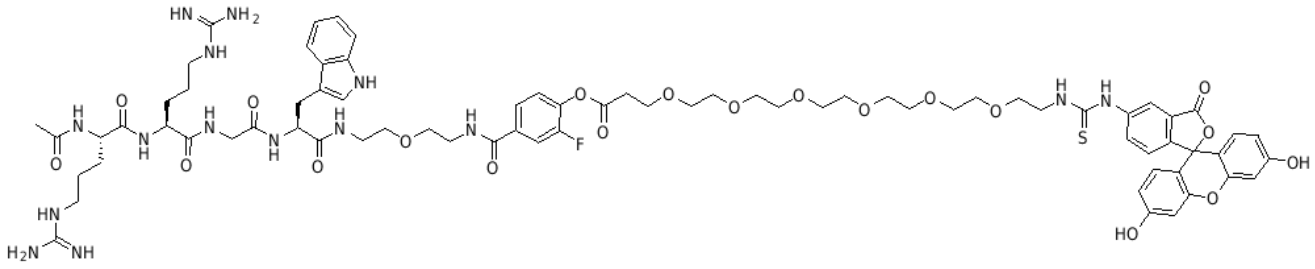
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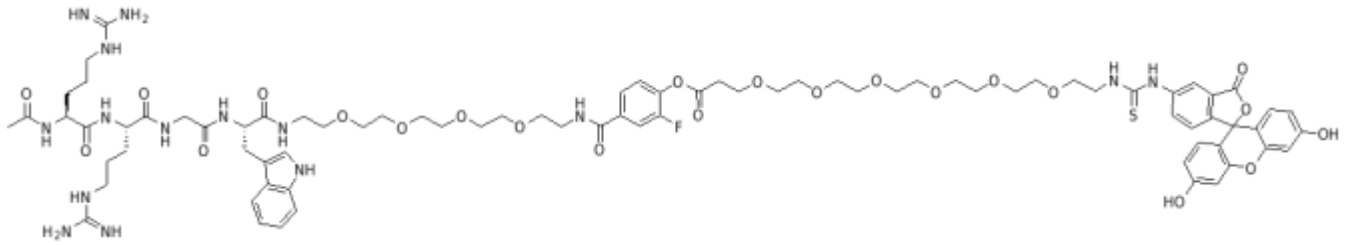
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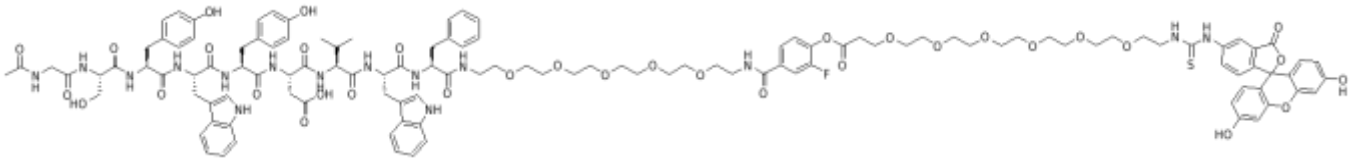
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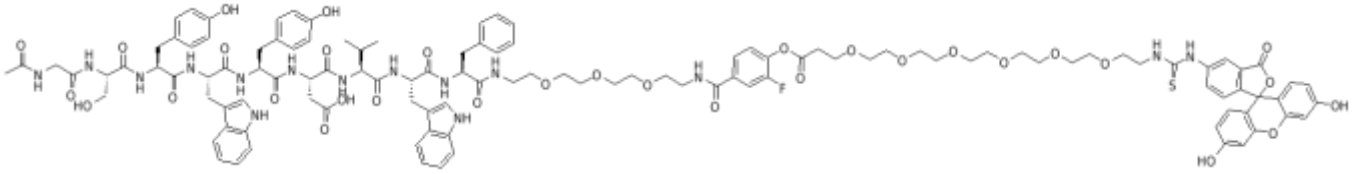
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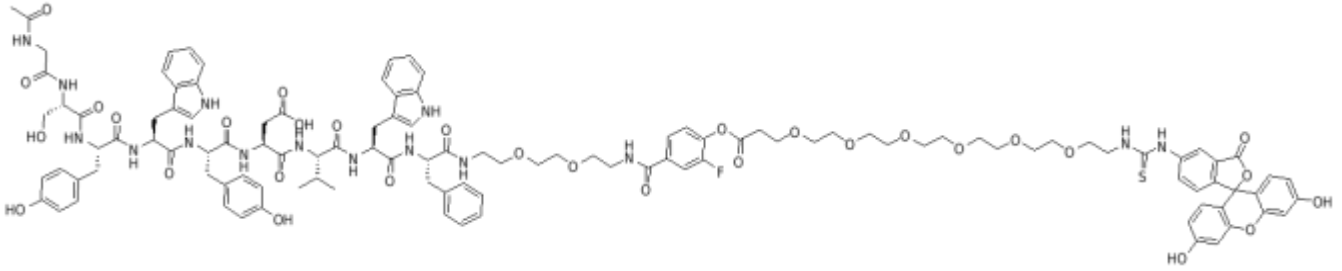
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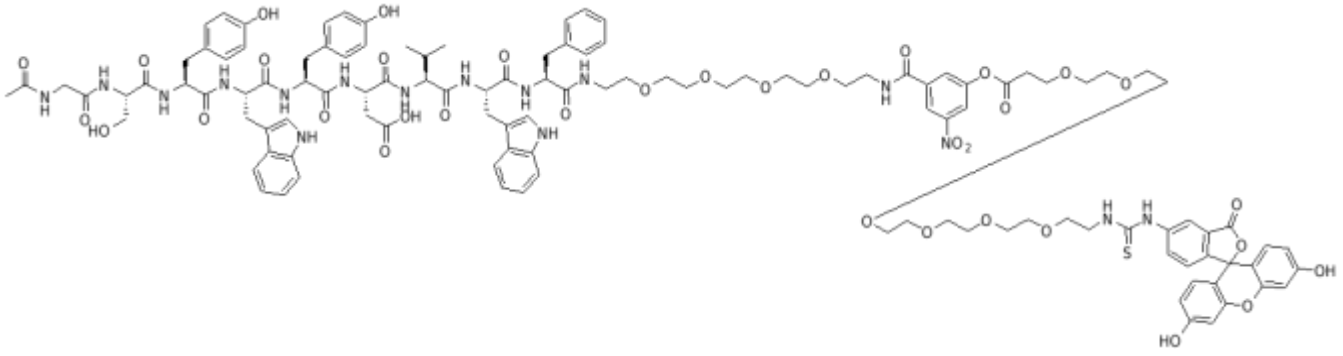
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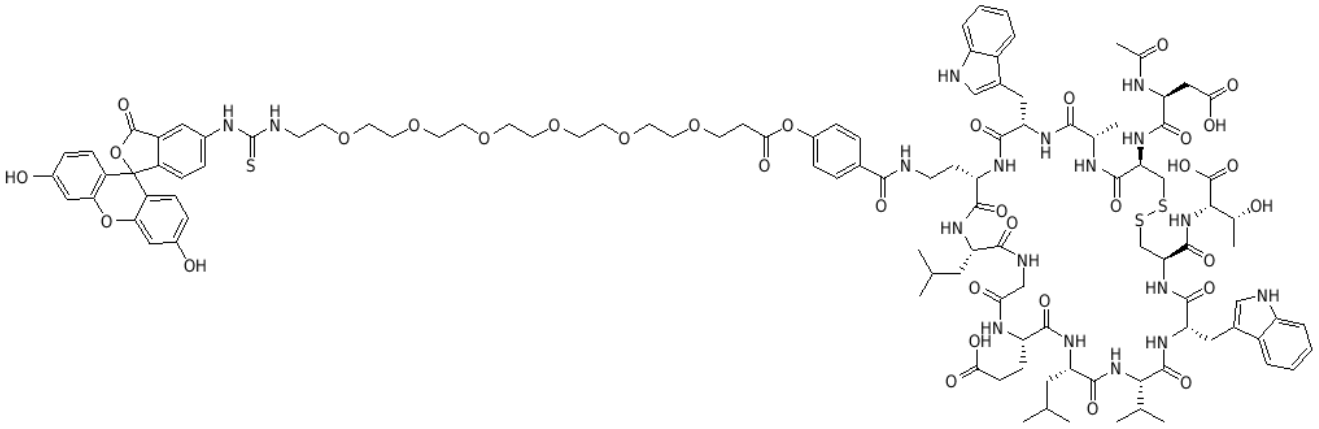
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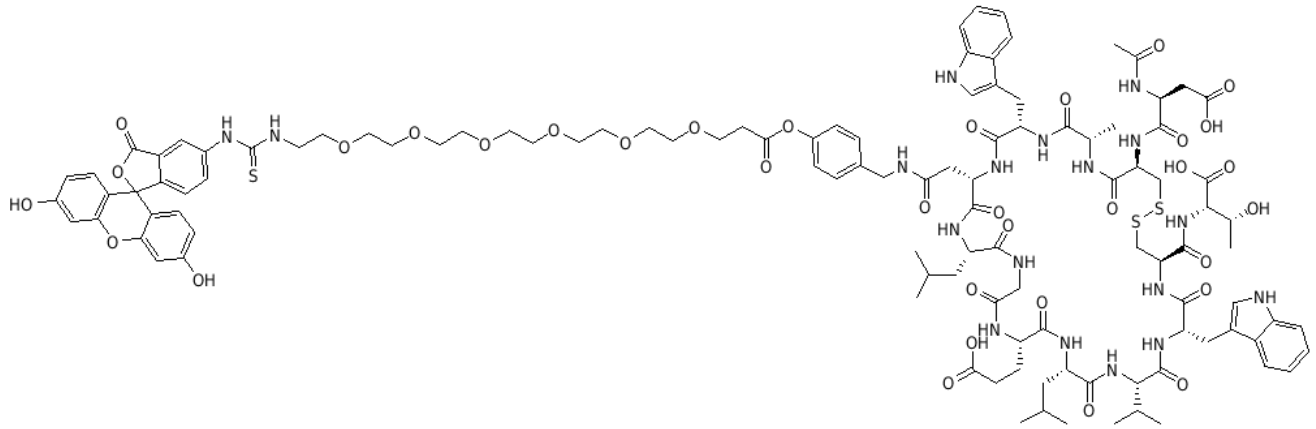
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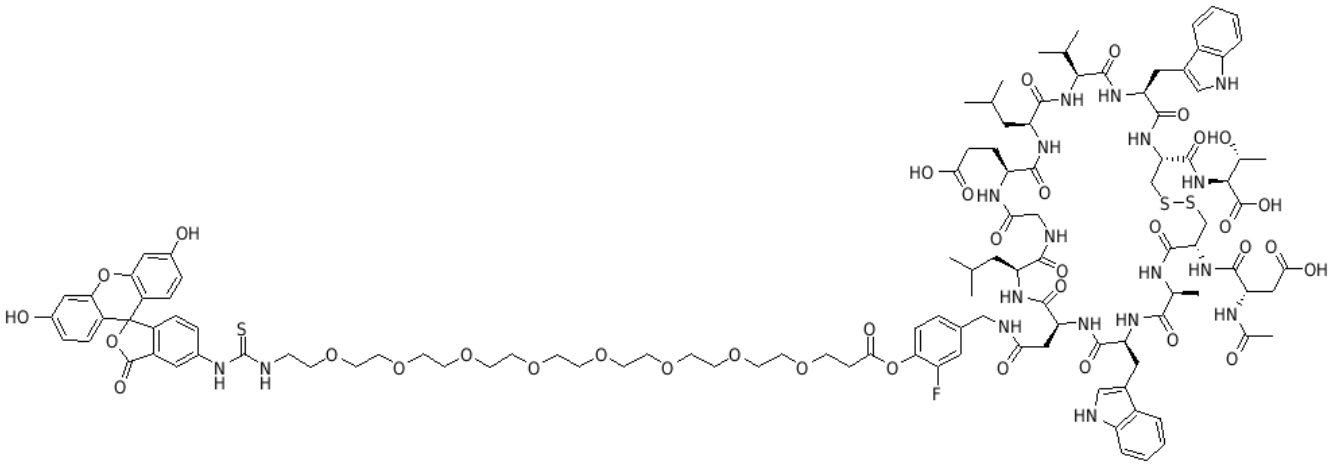
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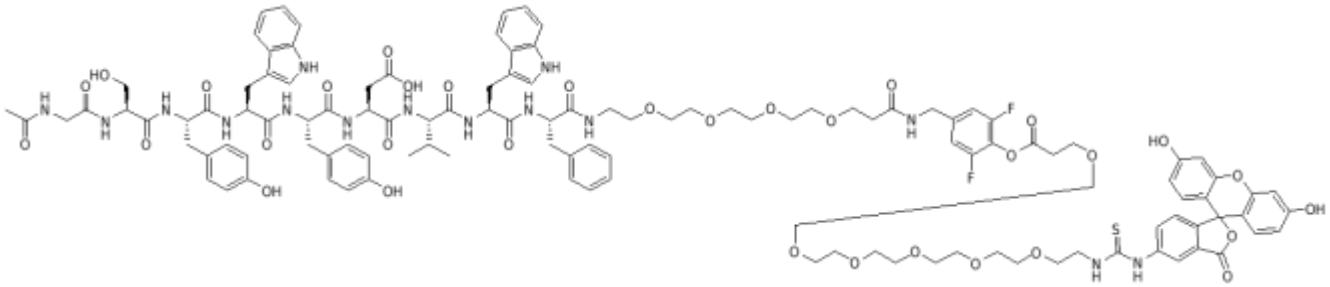
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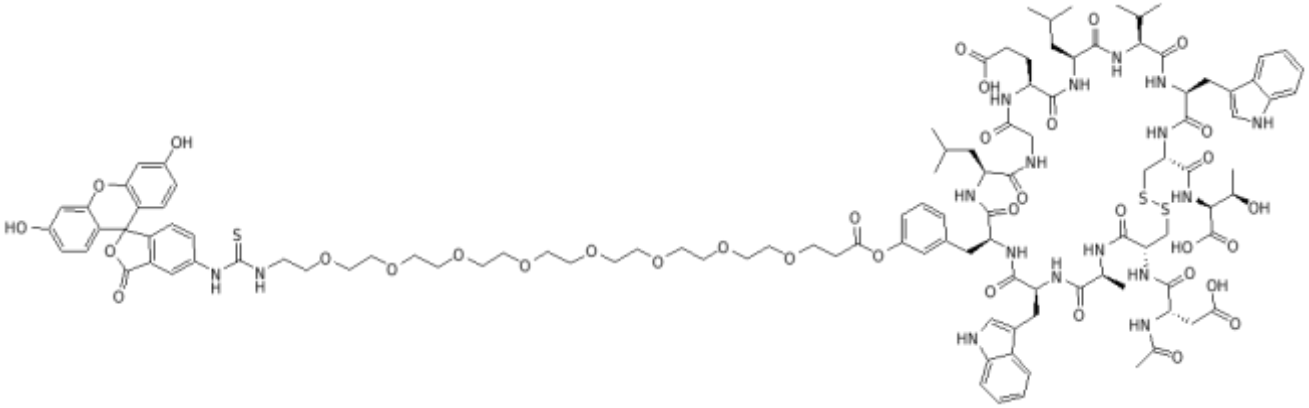
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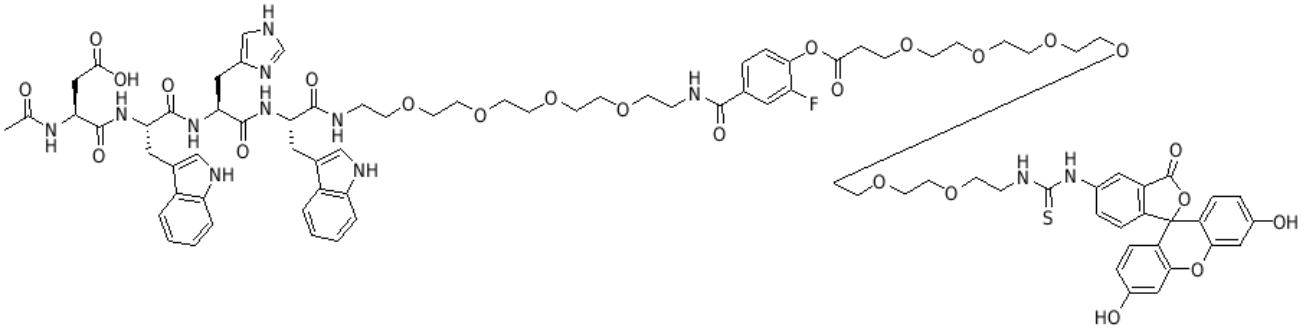
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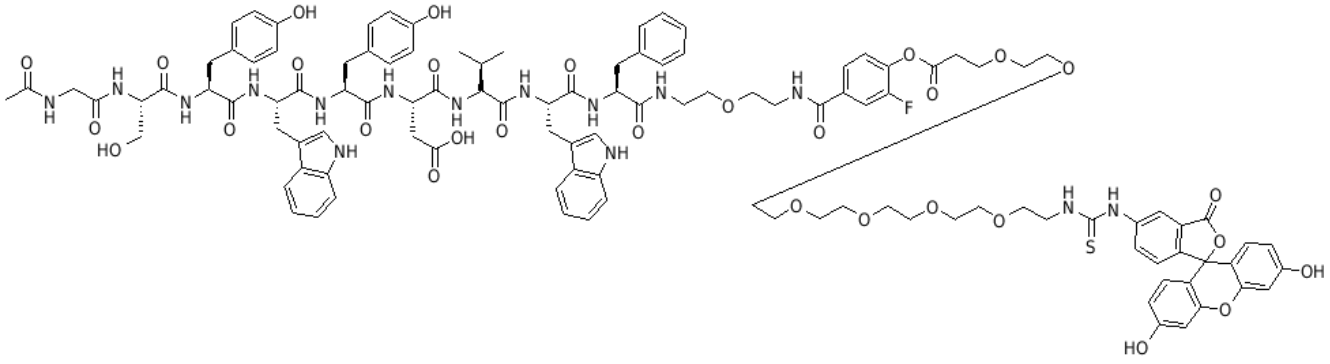
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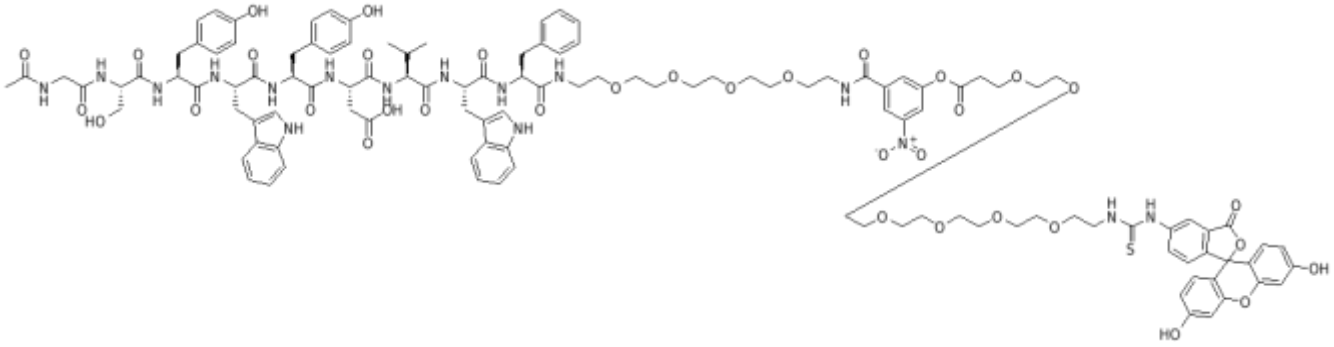
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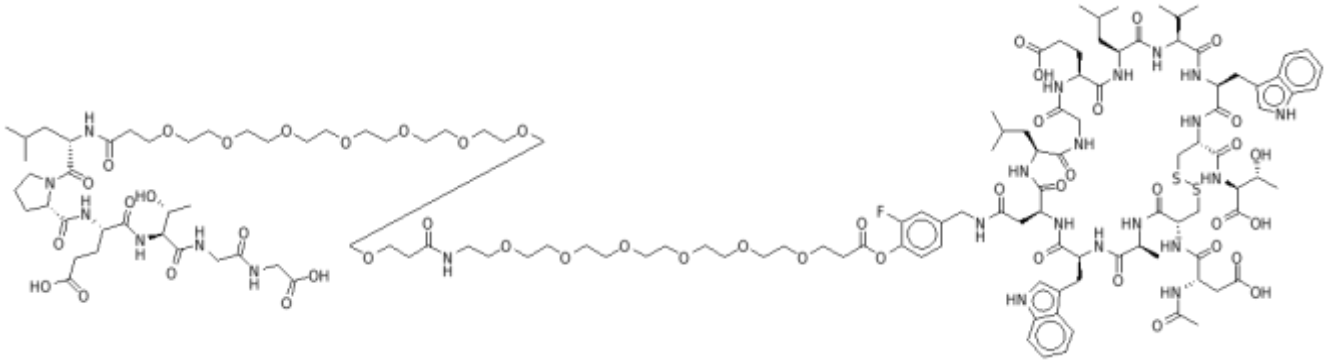
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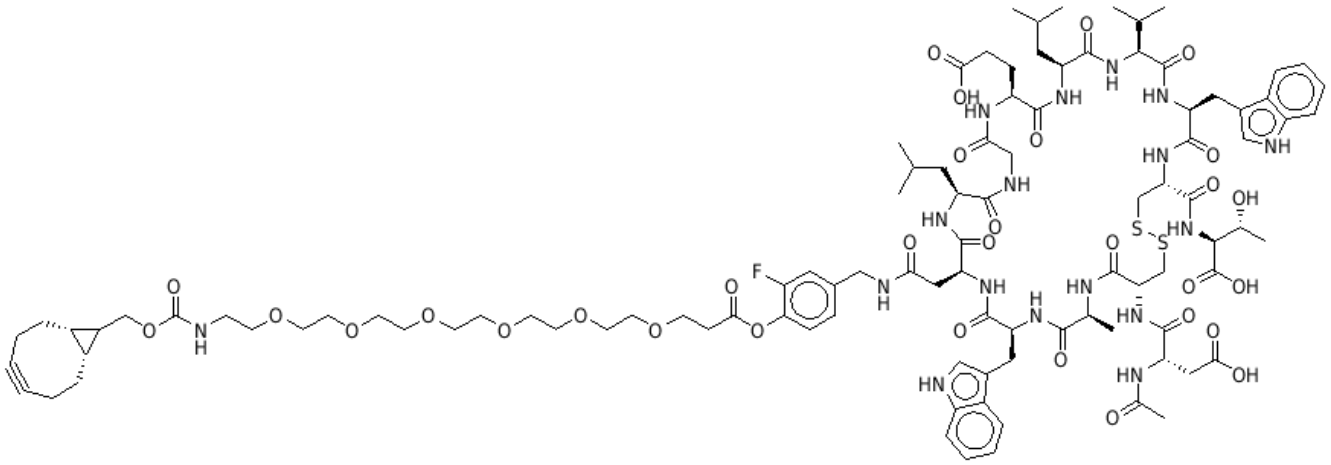
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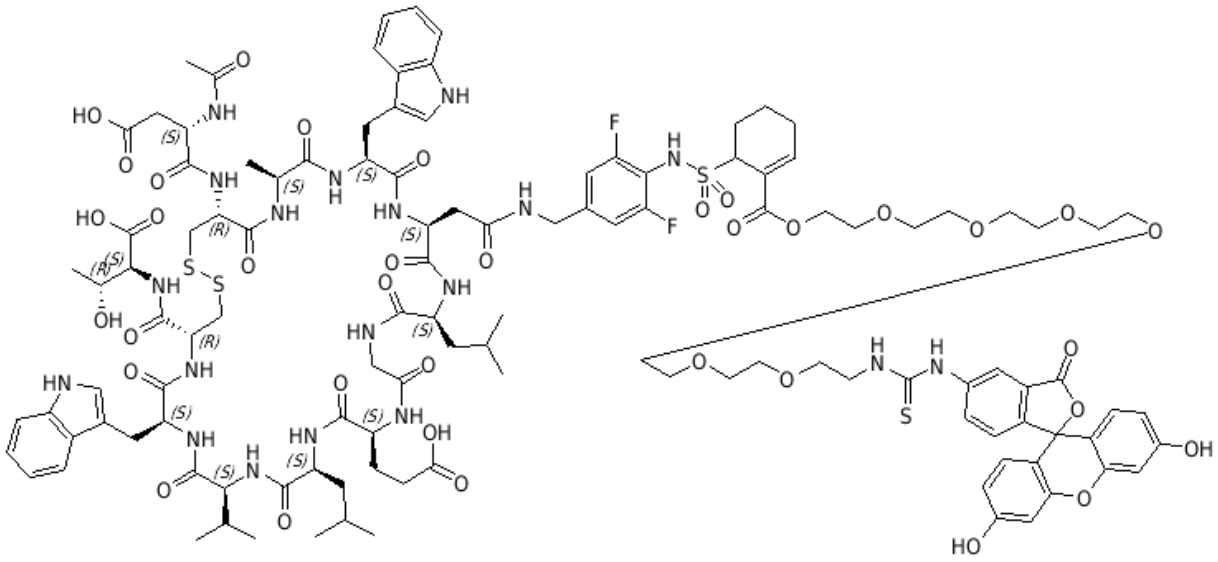
(I-50),



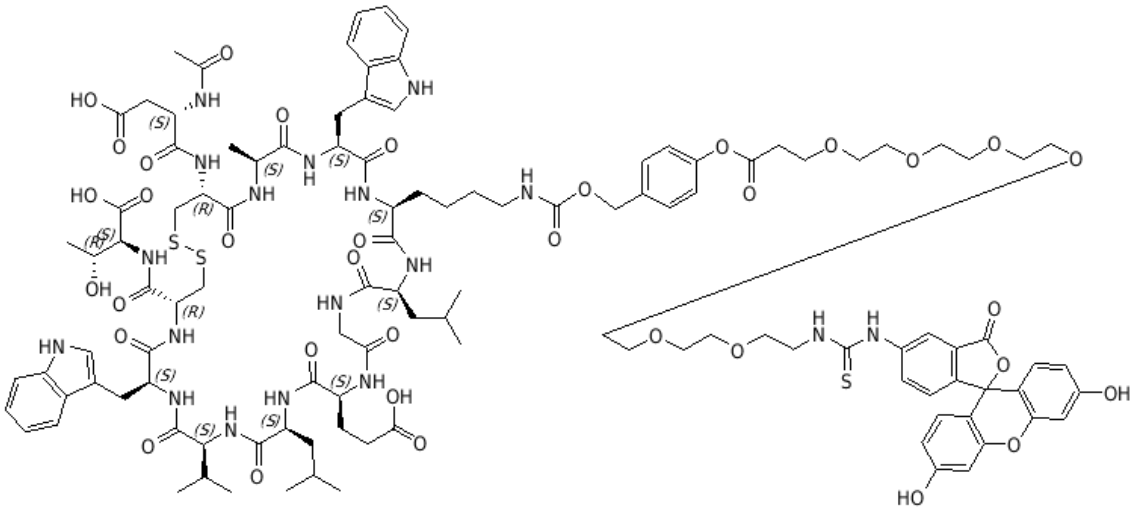
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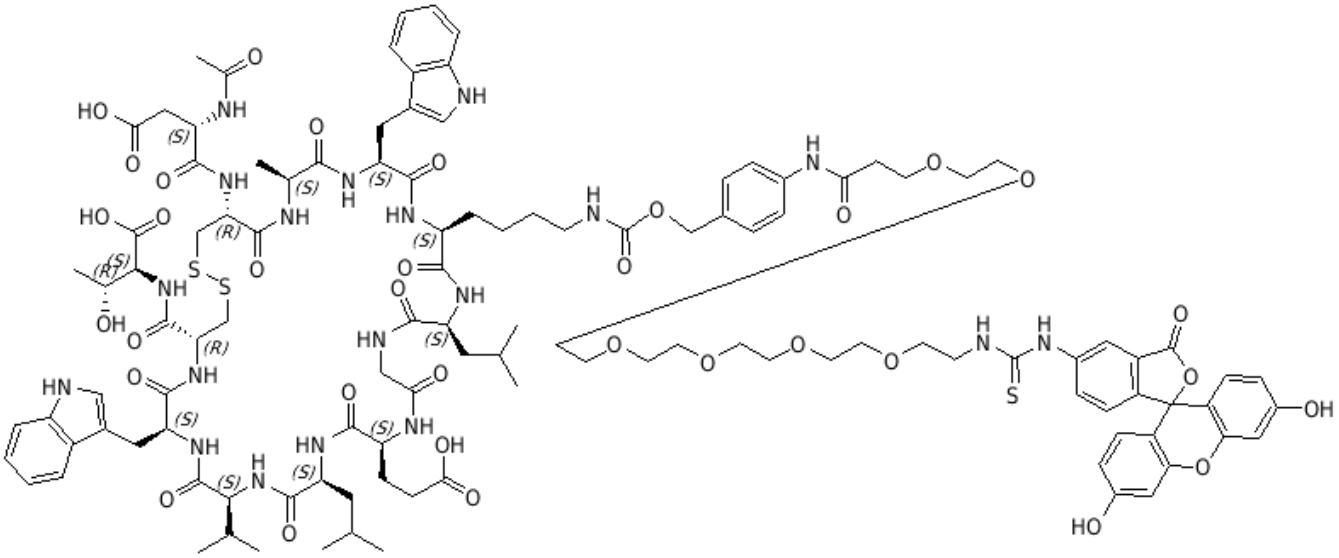
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(I-59),

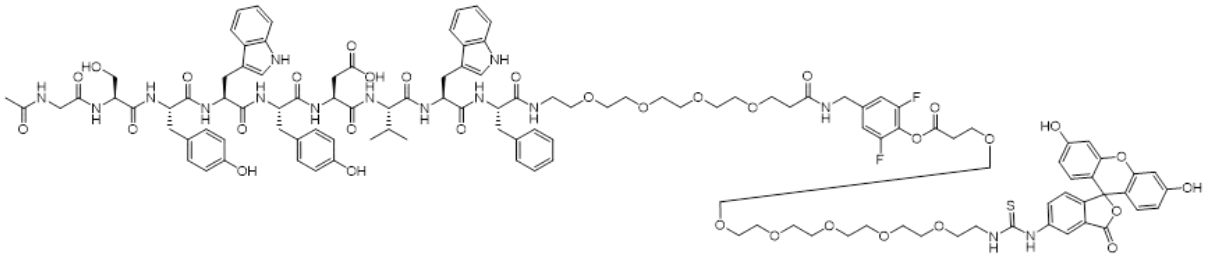


(I-61), or



(I-63).

14. The compound or salt of claim 1, wherein the compound is:



(I-45)

or a salt thereof.

15. A method of preparing an agent having the structure of P-I:

$$P–L^{PM}–MOI,$$

(P-I)

or a salt thereof, wherein:

P is an antibody agent;

L^{PM} is a linker; and

MOI is a moiety of interest, the method comprising steps of:

contacting an antibody agent with a reaction partner having the chemical structure of the compound of any one of claims 1-14; and

forming an agent having the structure of formula (P-I).

16. A method of preparing an agent having the structure of P-II:

$$P{-}N{-}L^{PM}{-}MOI,$$

(P-II)

wherein:

P-N is an antibody agent comprising a lysine residue;

L^{PM} is a linker; and

MOI is a moiety of interest;

the method comprising:

contacting an antibody agent with a reaction partner having the chemical structure of the compound of any one of claims 1-14; and

forming an agent having the structure of formula (P-II).

17. The method of claim 15 or 16, wherein the antibody agent is selected from IVIG, IgG1, IgG2, IgG3, IgG4, a monoclonal antibody agent, a polyclonal antibody agent, and an antibody fragment.

18. The method of any one of claims 15-17, wherein at least one of the following conditions is met:

(a) the moiety of interest is selectively attached to the antibody agent at K246 or K248 of an IgG1 heavy chain or a corresponding location;

(b) the moiety of interest is selectively attached to the antibody agent at K251 or K253 of an IgG2 heavy chain or a corresponding location; or

(c) the moiety of interest is selectively attached to the antibody agent at K239 or K241 of an IgG4 heavy chain or a corresponding location.

19. The method of any one of claims 15-18, wherein the contacting and forming steps are performed in one chemical reaction.