CLAIMS

1. An amylin receptor agonist comprising a peptide according to Formula I (SEQ ID NO: 36):

$AX_2X_3LX_5TX_7QTX_{10}RLAEFLHHX_{19}X_{20}X_{21}X_{22}FGX_{25}IX_{27}X_{28}X_{29}TX_{31}VGX_{34}X_{35}TX_{37}$,

wherein
X_2 is S or G,
X_3 is N, H, S, Q, A or E,
X_5 is A or S,
X_7 is A or L,
X_{10} is Q or A,
X_{19} is S or absent,
X_{20} is S, or absent,
X_{21} is D, E or absent,
X_{22} is N, P or absent,
X_{25} is A, K or P,
X_{27} is L or P,
X_{28} is S or P,
X_{29} is S or P,
X_{31} is D or E,
X_{34} is S or P,
X_{35} is N, D or E,
X_{37} is Y or P,
wherein the peptide comprises a C-terminal amide, and
with the proviso that at least two of the amino acids at positions 21, 31 and 35 are an aspartic acid or a glutamic acid.

2. The amylin receptor agonist according to claim 1 comprising, a peptide according to Formula I (SEQ ID NO: 36),
wherein
X_2 is S or G,
X_3 is H, S, Q or E,
X_5 is S,

X_7 is A,
X_{10} is Q or A,
X_{19} is S or absent,
X_{20} is S or absent,
X_{21} is D, E or absent,
X_{22} is N, P or absent,
X_{25} is A or P,
X_{27} is L or P,
X_{28} is S or P,
X_{29} is S or P,
X_{31} is D,
X_{34} is S or P,
X_{35} is N, D or E,
X_{37} is P.

3. The amylin receptor agonist according to claim 1 or claim 2, comprising a peptide according to Formula I (SEQ ID NO: 36),
wherein
X_2 is S or G,
X_3 is H, S, Q or E,
X_5 is S,
X_7 is A,
X_{10} is Q or A,
X_{19} is absent,
X_{20} is absent,
X_{21} is absent,
X_{22} is absent,
X_{25} is A or P,
X_{27} is L or P,
X_{28} is S or P,
X_{29} is S or P,
X_{31} is D,
X_{34} is S or P,
X_{35} is N, D or E,
X_{37} is P.

4. The amylin receptor agonist according to any one of the preceding claims, comprising a peptide according to Formula I (SEQ ID NO: 36),
wherein $X_{27}X_{28}X_{29}$ is selected from LPP or PSS.

5. An amylin receptor agonist comprising a peptide selected from the group consisting of SEQ ID NOs: 2-33, wherein the peptide comprises a C-terminal amide.

6. An amylin receptor agonist comprising a peptide selected from any one of the following:

AGELSTAQTARLAEFLHHFGPILPPTDVGSETP (SEQ ID NO: 13),
ASQLSTAQTARLAEFLHHSSDNFGPILPPTDVGSNTP (SEQ ID NO: 16),
ASHLSTAQTARLAEFLHHSSDPFGAIPSSTDVGPDTP (SEQ ID NO: 19),

wherein the peptide comprises a C-terminal amide.

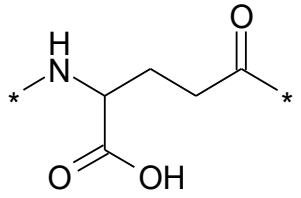
7. The amylin receptor agonist according to any one of the preceding claims, further comprising a protraction moiety.

8. The amylin receptor agonist according to the preceding claim, wherein the protraction moiety represented by formula (A)-(B) is attached, via linker (A), to the alpha position of the alanine (Ala, A) at position 1 or to the epsilon position of the lysine (Lys, K) at position 25.

9. The amylin receptor agonist according to any one of claims 7 and 8, wherein the amino acid at position 25 is alanine (Ala, A) or Proline (Pro, P) when the protraction moiety is attached to the alanine (Ala, A) at position 1.

10. The amylin receptor agonist according the any one of claims 7 to 9, wherein the protractor (B) of the protraction moiety by formula (A)-(B) comprises a C14 diacid, C16 diacid, C18 diacid, or C20 diacid.

11. The amylin receptor agonist according the any one of claims 7 to 10, wherein the linker (A) of the protraction moiety comprises a moiety according to Chem. 8a:



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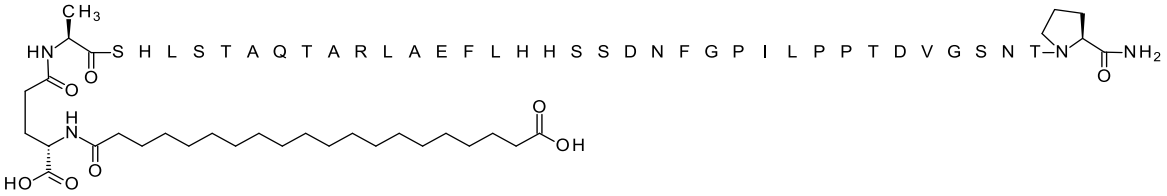
12. An amylin receptor agonist selected from the group consisting of:



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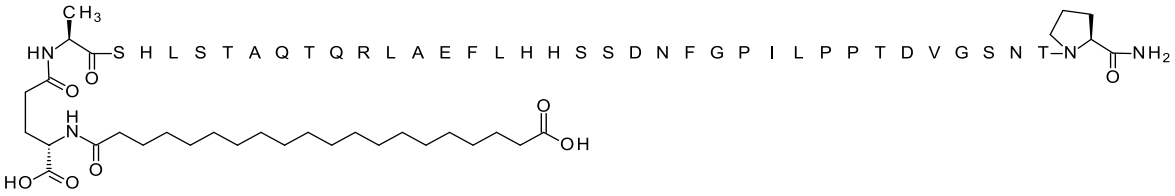

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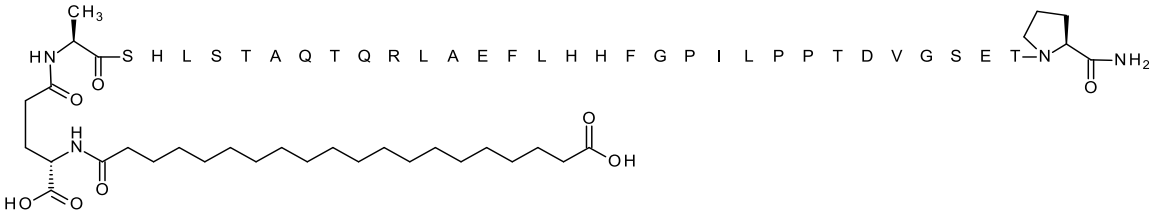

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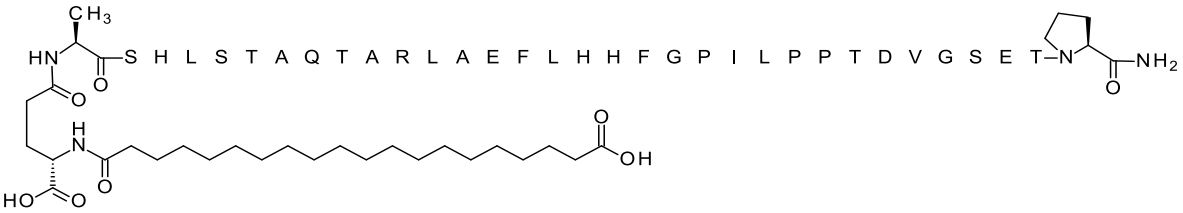

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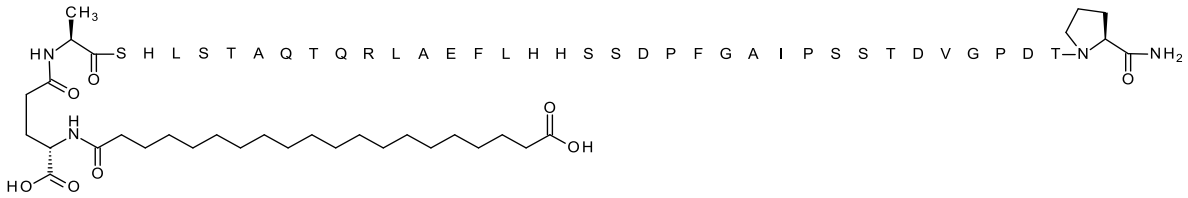

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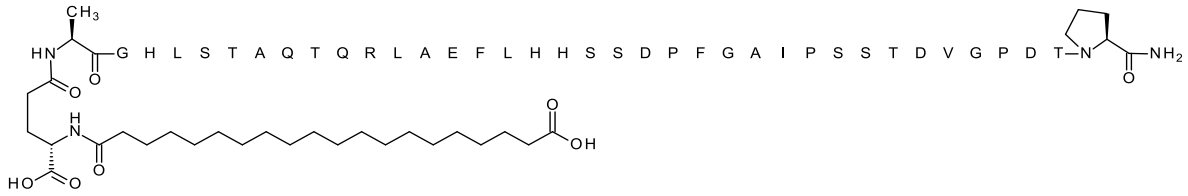

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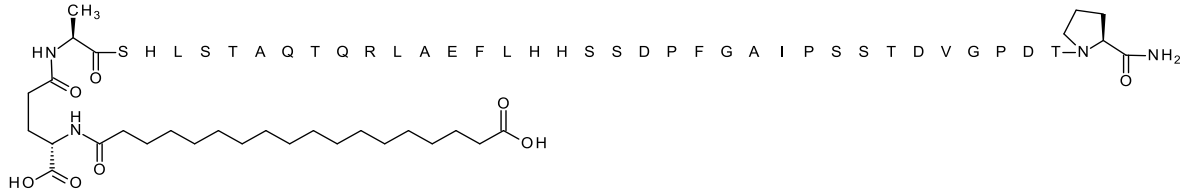

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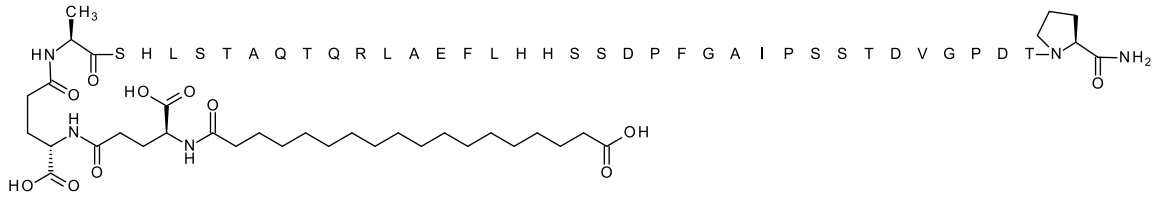

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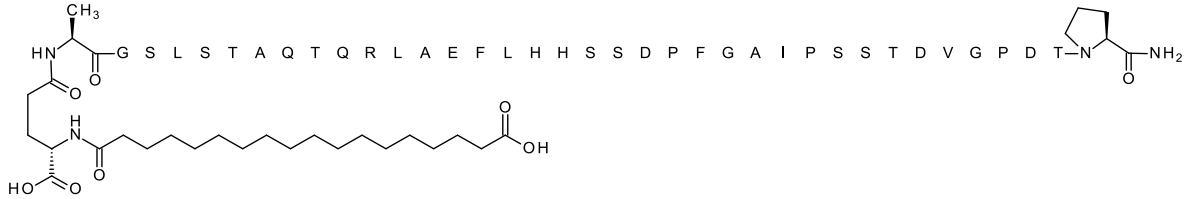

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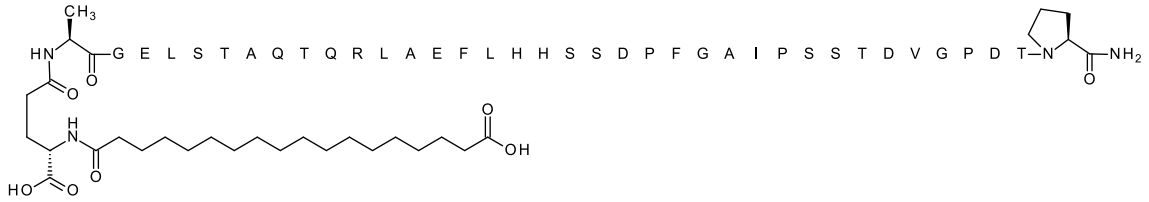

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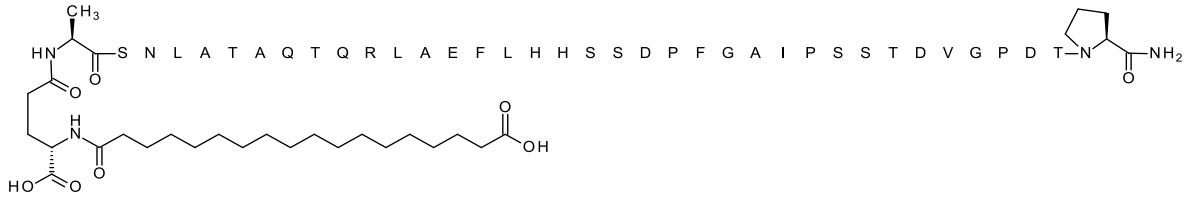

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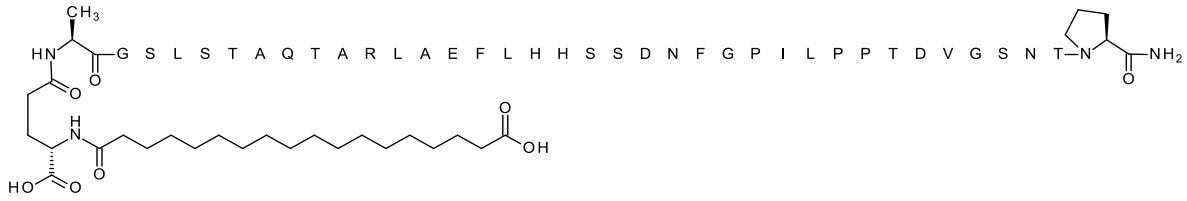

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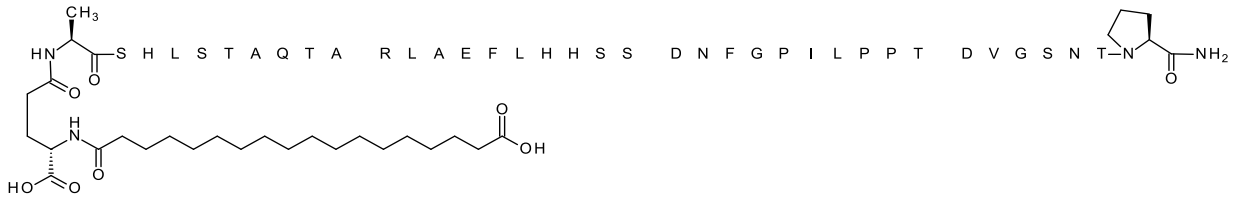

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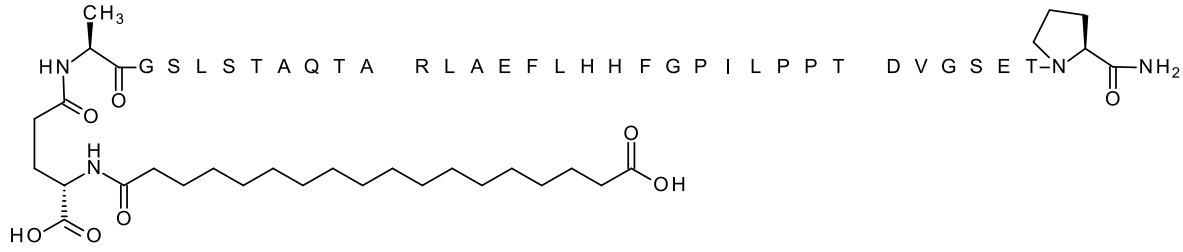

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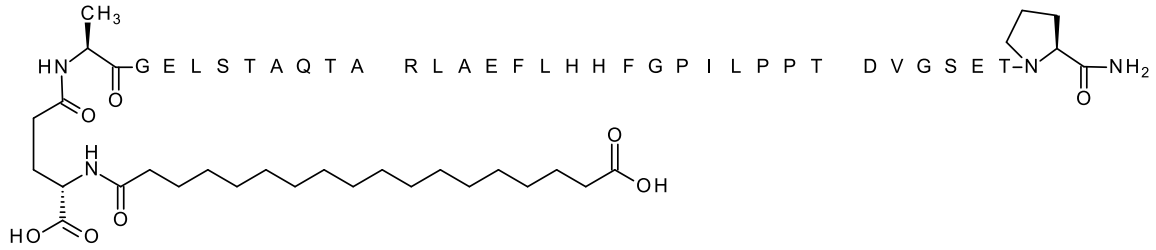

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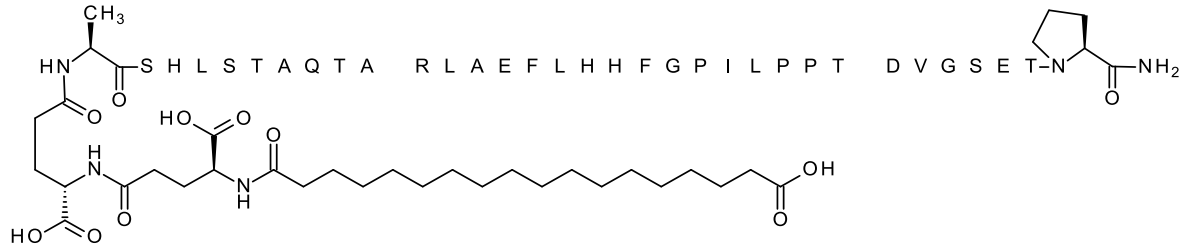

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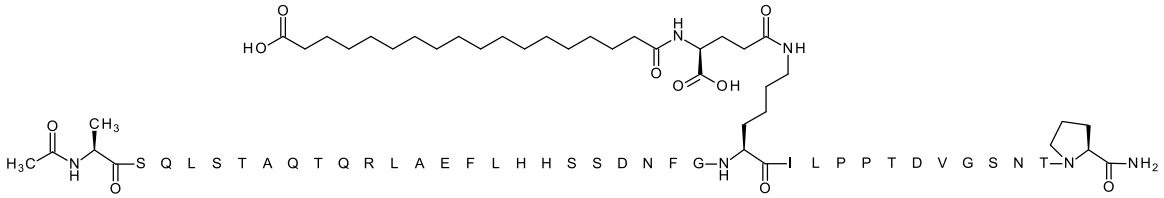

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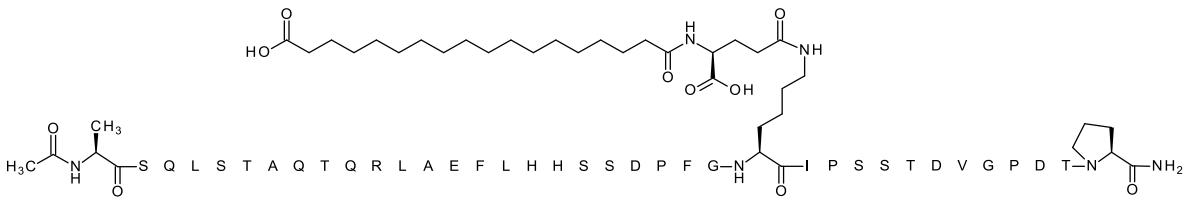

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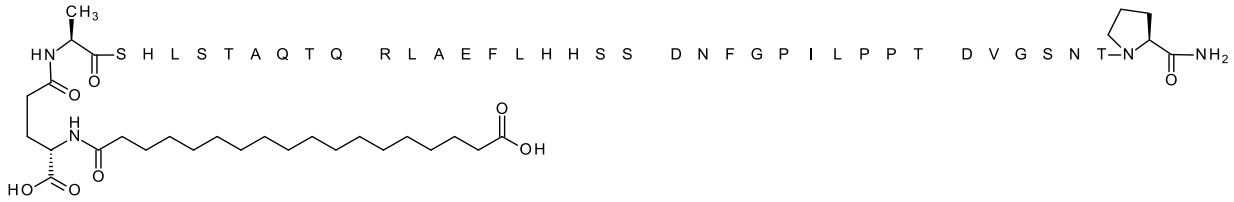

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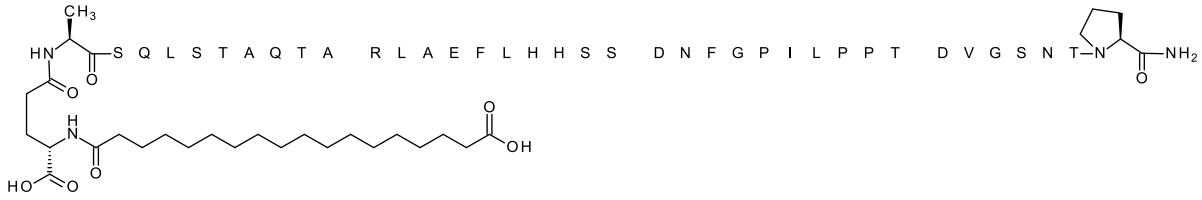

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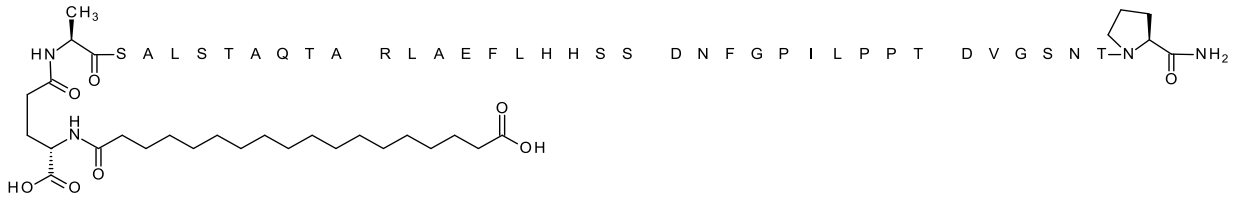

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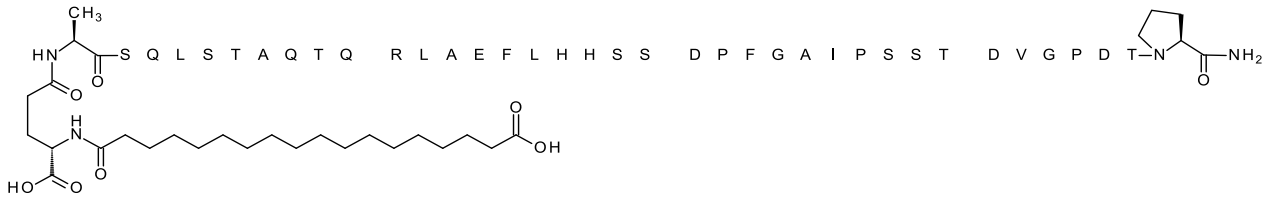

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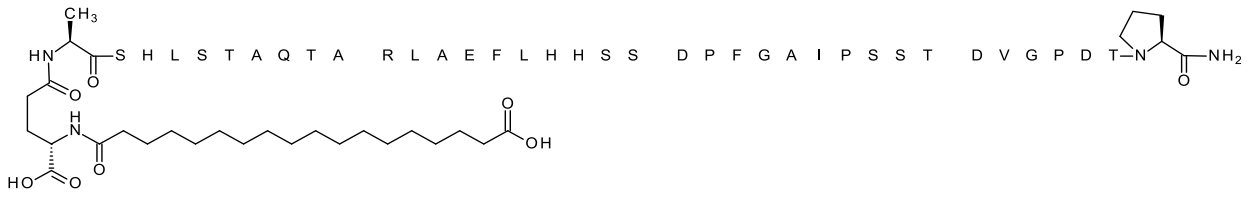

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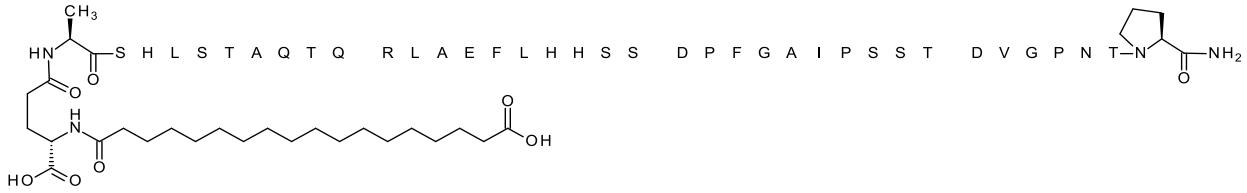

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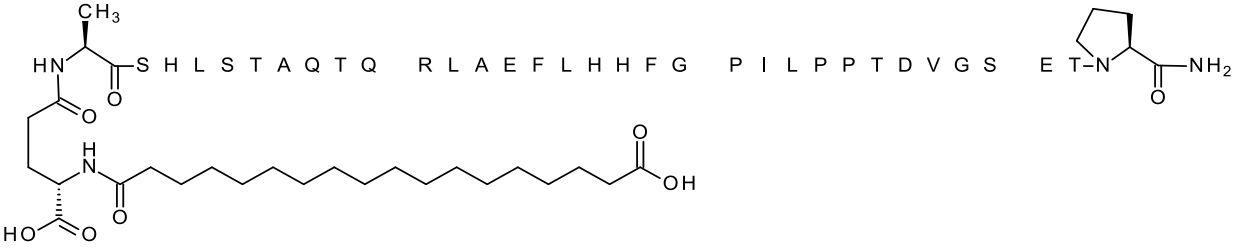
Compound 27



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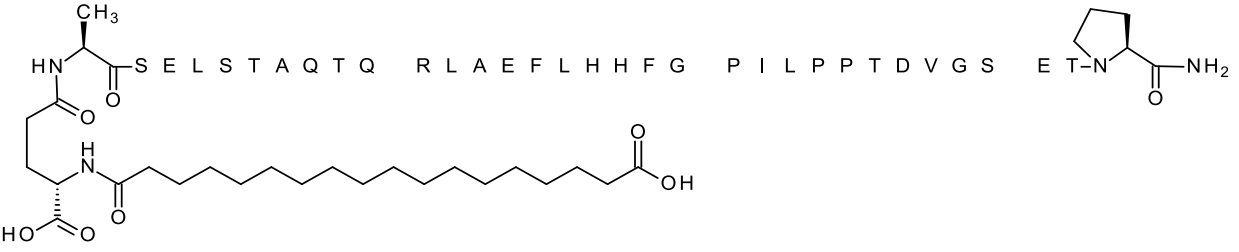

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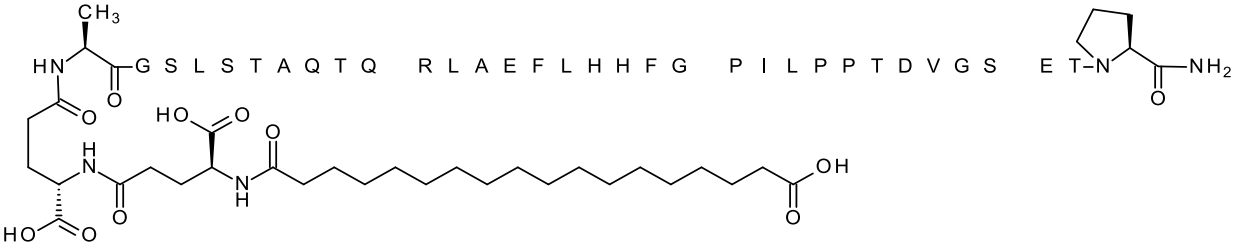

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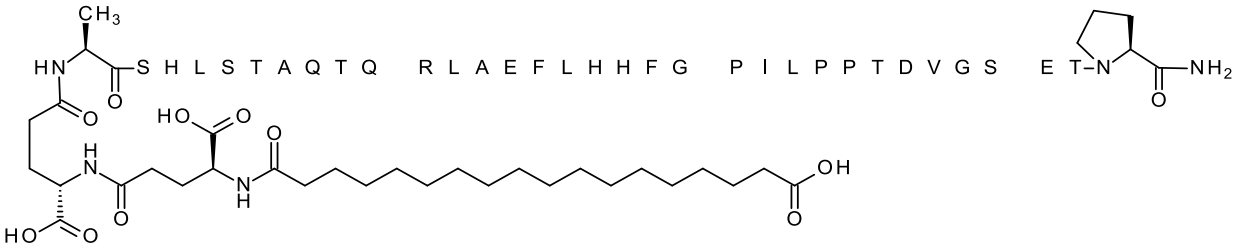

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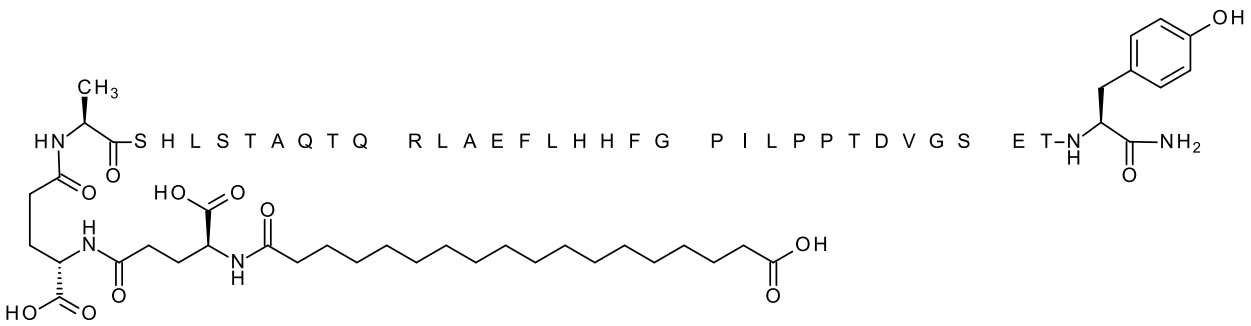

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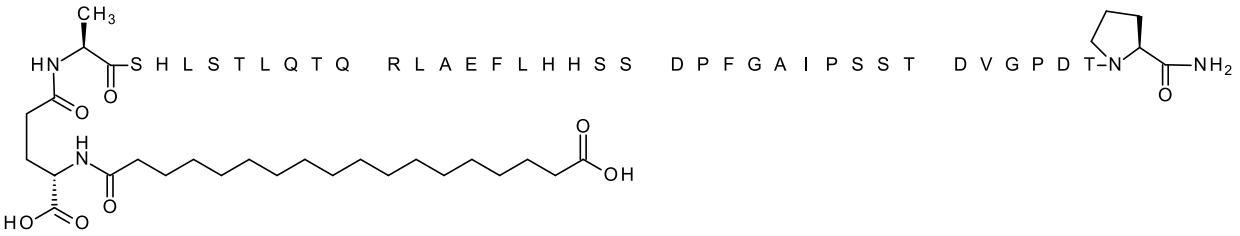

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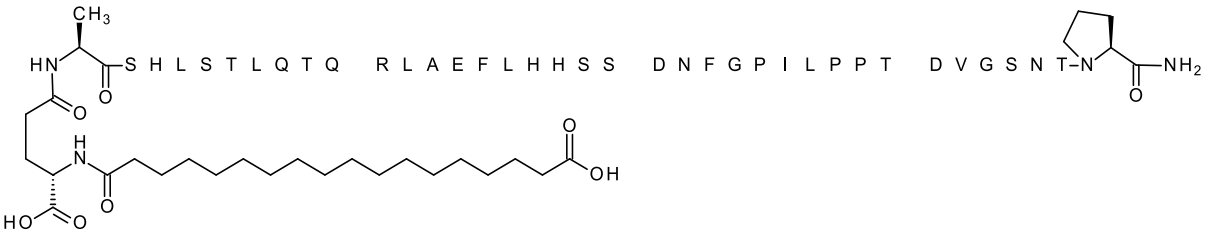

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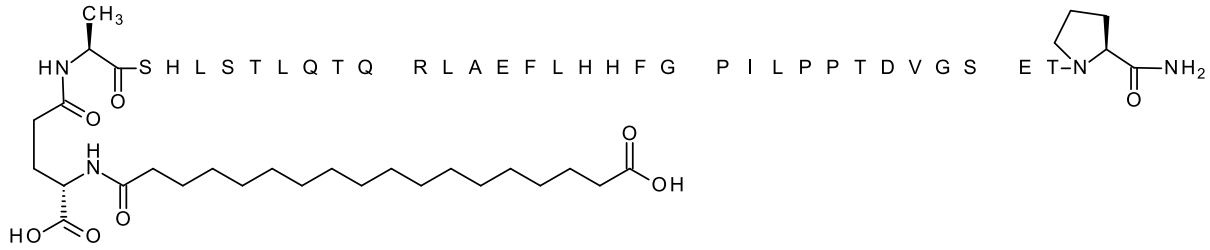


Compound 35,



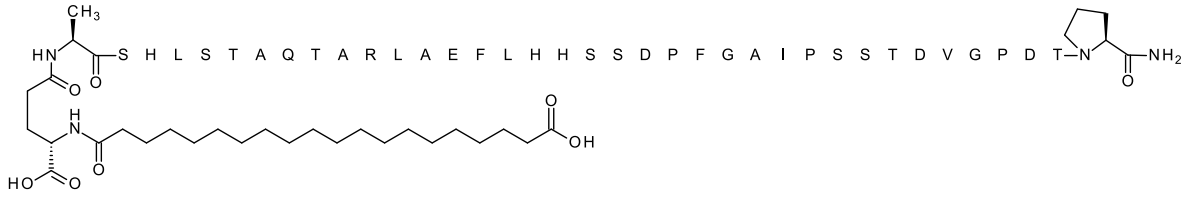
Compound 36,



Compound 37,



Compound 38,



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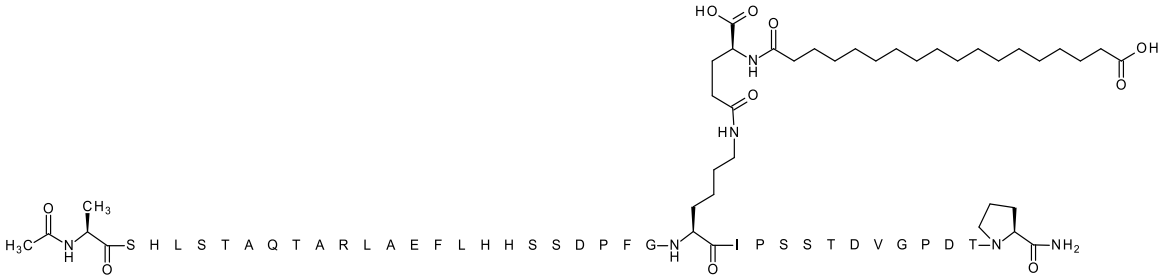

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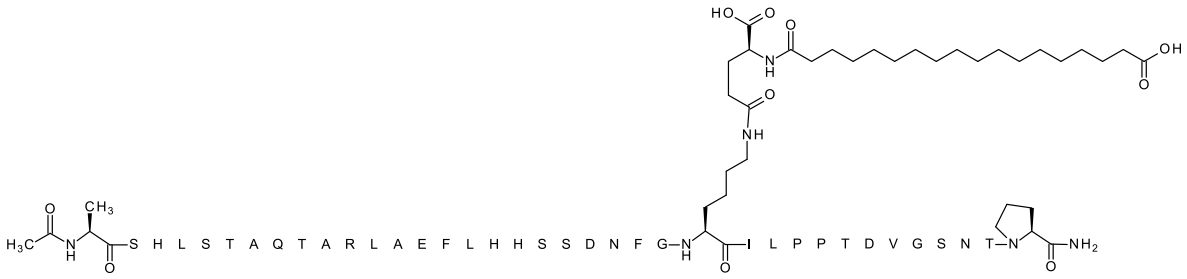

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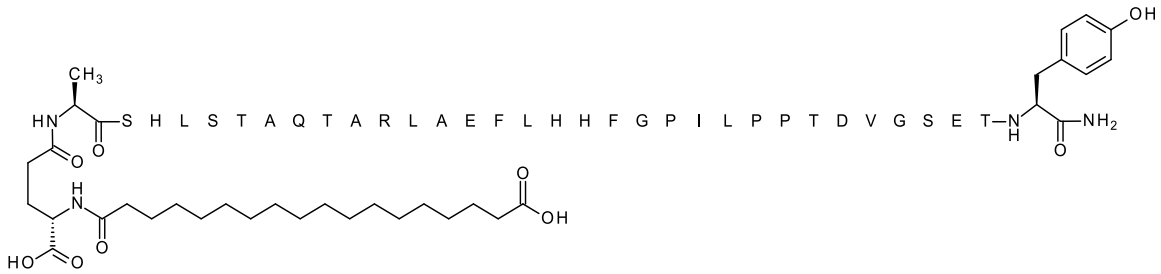

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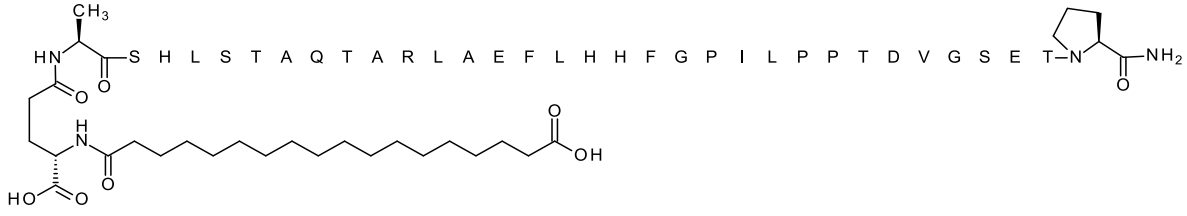
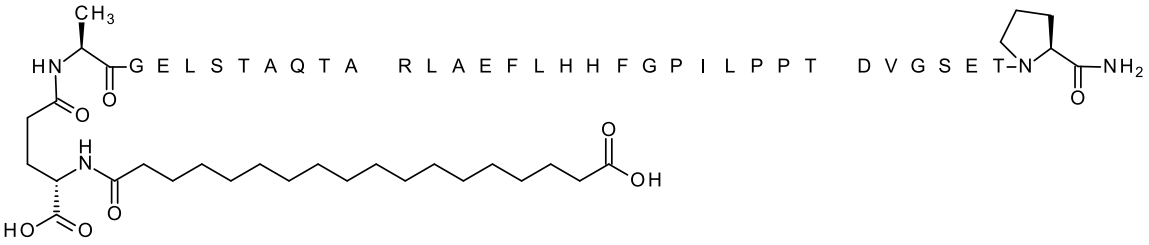


Compound 43;

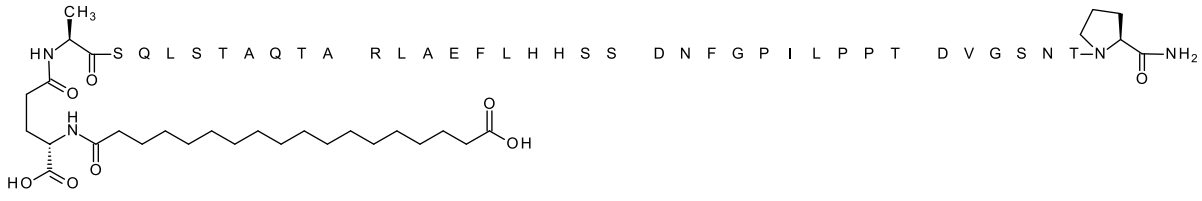
or a pharmaceutically acceptable salt, ester or amide thereof.

13. An amylin receptor agonist according to the formula:



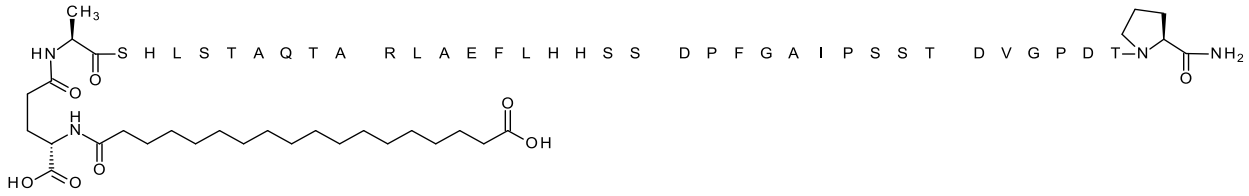
Compound 16.

14. An amylin receptor agonist according to the formula:



Compound 22.

15. An amylin receptor agonist according to the formula:



Compound 25.

16. A pharmaceutical composition comprising the amylin receptor agonist and/or pharmaceutically acceptable salt, ester, or amide thereof, according to any one of the preceding claims, and one or more pharmaceutically acceptable excipients.

17. The amylin receptor agonist according to any one of claims 1 to 15 or the pharmaceutical composition according to claim 16 for use as a medicament.

18. The amylin receptor agonist according to any one of claims 1 to 15 or the pharmaceutical composition according to claim 16, for use in the treatment of subjects with: an initial body mass index (BMI) of 27 or more, such as 30 or more, optionally in the presence of at least one weight-related comorbidity; diabetes, optionally in the presence of at least one weight-related comorbidity; cardiovascular

disease; non-alcoholic steatohepatitis and/or cognitive impairment, such as that caused by Alzheimer’s disease.