

Claims

1. A peptide comprising the amino acid sequence of any one of SEQ ID NOs: 2-11, 13, or 14.
2. The peptide of claim 1, comprising the amino acid sequence of SEQ ID NO: 13.
3. The peptide of claim 1, comprising the amino acid sequence of SEQ ID NO: 14.
4. The peptide of any one of claims 1-3, wherein at least one amino acid pair at positions 12 and 16 or 16 and 20 of the peptide forms a ring.
5. The peptide of any one of claims 1-4, wherein the peptide is capable of activating a GLP-1 receptor and a glucagon receptor.
6. A pharmaceutical composition comprising the peptide of any one of claims 1-5 as an active ingredient.
7. The pharmaceutical composition of claim 6, further comprising a pharmaceutically acceptable carrier.
8. The peptide of any one of claims 1-5, for use in the treatment of obesity.
9. Use of the peptide of any one of claims 1-5 or the pharmaceutical composition of claim 6 or 7 in the manufacture of a medicament for the treatment of obesity wherein the medicament is to be administered alone or in combination with pharmaceutical formulations exhibiting an effect of treating obesity.
10. The use of claim 9, wherein the pharmaceutical formulation is a GLP-1 receptor agonist, a leptin receptor agonist, a DPP-IV inhibitor, a Y5 receptor antagonist, a melanin-concentrating hormone (MCH) receptor antagonist, a Y2/3 receptor agonist, an MC3/4 receptor

agonist, a gastric/pancreatic lipase inhibitor, a 5HT_{2c} agonist, a 3A receptor agonist, an amylin receptor agonist, a ghrelin antagonist, or a ghrelin receptor antagonist.

Claims

1. A peptide comprising the amino acid sequence of any one of SEQ ID Nos: 2-14.
2. The peptide of claim 1, comprising the amino acid sequence SEQ ID NO: 12.
3. The peptide of claim 1, comprising the amino acid sequence of SEQ ID NO: 13.
4. The peptide of claim 1, comprising the amino acid sequence of SEQ ID NO: 14.
5. The peptide of any one of the preceding claims, wherein the peptide is capable of activating a GLP-1 receptor and a glucagon receptor.
6. The peptide of any one of the preceding claims, wherein the peptide has an anti-obesity effect.
7. The peptide of any one of the preceding claims, wherein the amino acids at positions 10 and 14, 12 and 16, 16 and 20, 20 and 24, or 24 and 28 of the peptide form a ring.
8. A pharmaceutical composition comprising the peptide of any one of claims 1 to 7 as an active ingredient and a pharmaceutically acceptable carrier.
9. The pharmaceutical composition of claim 8, wherein the pharmaceutical composition is to be administered alone or in combination with other pharmaceutical formulations exhibiting an effect of preventing or treating obesity.
10. The pharmaceutical composition of claim 9, wherein the pharmaceutical formulation exhibiting an effect of preventing or treating obesity is a GLP-1 receptor agonist, a leptin receptor agonist, a DPP-IV inhibitor, a Y5 receptor antagonist, a melanin-concentrating hormone (MCH) receptor antagonist, a Y2/3 receptor agonist, an MC3/4 receptor agonist, a gastric/pancreatic lipase inhibitor, a 5HT2c agonist, a 3A receptor agonist, an amylin receptor agonist, a ghrelin antagonist, or a ghrelin receptor antagonist.

11. The peptide of any one of claims 1 to 7 or the pharmaceutical composition of any one of claims 8 to 10 for use in the prevention and treatment of obesity.

12. Use of the peptide of any one of claims 1 to 7 or the pharmaceutical composition of any one of claims 8 to 10 in the manufacture of a medicament for preventing or treating obesity.