

## Claims

1. A conjugate comprising: a. a monoclonal antibody, wherein the monoclonal antibody comprises a heavy chain variable domain (VH) having the polypeptide sequence of SEQ ID NO:12, and a light chain variable domain (VL) having the polypeptide sequence of SEQ ID NO:14; and b. at least one pharmacologically active moiety.
2. The conjugate of claim 1, wherein the monoclonal antibody further comprises a Fc portion.
3. The conjugate of claim 2, wherein the monoclonal antibody comprises a heavy chain (HC) having the polypeptide sequence of SEQ ID NO: 13, and a light chain (LC) having the polypeptide sequence of SEQ ID NO: 15.
4. The conjugate of claim 1, wherein the pharmacologically active moiety is a therapeutic peptide.
5. The conjugate of claim 4, wherein the therapeutic peptide is conjugated to the monoclonal antibody thereof at the cysteine residue of the polypeptide sequence of SEQ ID NO:18.
6. The conjugate of claim 4, wherein the therapeutic peptide is conjugated to the monoclonal antibody via a linker.
7. The conjugate of claim 6, wherein the linker comprises a peptide linker, a hydrocarbon linker, a polyethylene glycol (PEG) linker, a polypropylene glycol (PPG) linker, a polysaccharide linker, a polyester linker, or a hybrid linker consisting of PEG and an embedded heterocycle.
8. The conjugate of claim 4, wherein the therapeutic peptide is selected from the group consisting of oxyntomodulin, glucagon-like peptide 1 (GLP1), exendin, amylin, alpha-melanocyte stimulating hormone (MSH), cocaine- and amphetamine-regulated transcript (CART), neuropeptide Y receptor Y1 (NPY1) antagonists, neuropeptide Y receptor Y5 (NPY5) antagonists, neurotensin S, neuropeptide B, neuropeptide W, ghrelin, bombesin-like receptor 3 (BRS3), galanin, cholecystokinin (CCK), orexin, melanin-concentrating hormone (MCH), oxytocin, and stresscopin.
9. The conjugate of claim 8, wherein the therapeutic peptide is oxyntomodulin comprising the polypeptide sequence of SEQ ID NO:24.
10. A pharmaceutical composition comprising the conjugate of claim 1 and a pharmaceutically acceptable carrier.
11. A pharmaceutical composition comprising:
  - a. a conjugate; and
  - b. a pharmaceutically acceptable carrier;wherein the conjugate comprises:
  - i. a monoclonal antibody, wherein the monoclonal antibody comprises a heavy chain complementarity determining region 1 (HCDR1), a HCDR2, a HCDR3, a light chain complementarity determining region 1 (LCDR1), a LCDR2, and a LCDR3 having the polypeptide sequences of SEQ ID NOS: 16, 17, 18, 19, 20, and 21, respectively; and
  - ii. at least one pharmacologically active moiety;for use in therapy,  
wherein the pharmaceutical composition is a solid pharmaceutical composition, and wherein the pharmacologically active moiety is a therapeutic peptide wherein the therapeutic peptide is selected from the group consisting of oxyntomodulin, glucagon-like peptide 1 (GLP1), exendin, amylin, alpha-melanocyte stimulating hormone (MSH), cocaine and amphetamine-regulated transcript (CART), neuropeptide Y receptor Y1 (NPY1) antagonists, neuropeptide Y receptor Y5 (NPY5) antagonists, neurotensin S, neuropeptide B, neuropeptide W, ghrelin, bombesin-like receptor 3 (BRS3), galanin, cholecystokinin (CCK), orexin, melanin-concentrating hormone (MCH), oxytocin, and stresscopin.
12. Use of a pharmaceutical composition in the manufacture of a medicament for reducing food intake or for the treatment of a disease or disorder in a subject in need thereof, the pharmaceutical composition comprises:
  - a. a conjugate; and

- b. a pharmaceutically acceptable carrier;  
 wherein the conjugate comprises:
- i. a monoclonal antibody, wherein the monoclonal antibody comprises a heavy chain complementarity determining region 1 (HCDR1), a HCDR2, a HCDR3, a light chain complementarity determining region 1 (LCDR1), a LCDR2, and a LCDR3 having the polypeptide sequences of SEQ ID NOs: 16, 17, 18, 19, 20, and 21, respectively; and
  - ii. at least one pharmacologically active moiety;
- wherein the pharmaceutical composition is a solid pharmaceutical composition, wherein the pharmacologically active moiety is a therapeutic peptide, wherein the therapeutic peptide is selected from the group consisting of oxyntomodulin, glucagon-like peptide 1 (GLP1), exendin, amylin, alpha-melanocyte stimulating hormone (MSH), cocaine and amphetamine-regulated transcript (CART), neuropeptide Y receptor Y1 (NPY1) antagonists, neuropeptide Y receptor Y5 (NPY5) antagonists, neurotensin S, neuropeptide B, neuropeptide W, ghrelin, bombesin-like receptor 3 (BRS3), galanin, cholecystokinin (CCK), orexin, melanin-concentrating hormone (MCH), oxytocin, and stresscopin, wherein the disease or disorder is selected from the group consisting of obesity, type II diabetes, metabolic syndrome, insulin resistance, impaired glucose tolerance, hyperglycemia, hyperinsulinemia, hypertriglyceridemia, dyslipidemia, atherosclerosis, diabetic nephropathy, hypertension, non-alcoholic fatty liver disease (NAFLD), and non-alcoholic steatohepatitis (NASH), and wherein an effective amount of the pharmaceutical composition is to be administered to the subject.
13. The use of claim 12, wherein the pharmaceutical composition is to be administered in combination with at least one additional agent.
14. The use of claim 13, wherein the additional agent is a glucagon-like-peptide-1 receptor modulator.
15. The use of claim 11, wherein the pharmaceutical composition is to be administered in combination with liraglutide or dulaglutide.
16. Use of a pharmaceutical composition comprising a conjugate comprising: a. a monoclonal antibody, wherein the monoclonal antibody comprises a heavy chain variable domain (VH) having the polypeptide sequence of SEQ ID NO:12, and a light chain variable domain (VL) having the polypeptide sequence of SEQ ID NO:14; and b. at least one pharmacologically active moiety; and a pharmaceutically acceptable carrier, in the manufacture of a medicament for reducing food intake or for the treatment of a disease or disorder in a subject in need thereof, wherein said disease or disorder is selected from the group consisting of obesity, type II diabetes, metabolic syndrome, insulin resistance, impaired glucose tolerance, hyperglycemia, hyperinsulinemia, hypertriglyceridemia, dyslipidemia, atherosclerosis, diabetic nephropathy, hypertension, non-alcoholic fatty liver disease (NAFLD), and non-alcoholic steatohepatitis (NASH), and wherein an effective amount of the pharmaceutical composition is to be administered to the subject.
17. The use of claim 16, wherein the monoclonal antibody further comprises a Fc portion.
18. The use of claim 17, wherein the monoclonal antibody comprises a heavy chain (HC) having the polypeptide sequence of SEQ ID NO:13, and a light chain (LC) having the polypeptide sequence of SEQ ID NO:15.
19. The use of claim 16, wherein the pharmacologically active moiety is a therapeutic peptide.
20. The use of claim 19, wherein the therapeutic peptide is conjugated to the monoclonal antibody thereof at the cysteine residue of the polypeptide sequence of SEQ ID NO:18.
21. The use of claim 19, wherein the therapeutic peptide is conjugated to the monoclonal antibody via a linker.
22. The use of claim 21, wherein the linker comprises a peptide linker, a hydrocarbon linker, a polyethylene glycol (PEG) linker, a polypropylene glycol (PPG) linker, a polysaccharide linker, a polyester linker, or a hybrid linker consisting of PEG and an embedded heterocycle.
23. The use of claim 19, wherein the therapeutic peptide is selected from the group consisting of oxyntomodulin, glucagon-like peptide 1 (GLP1), exendin (exenatide), amylin (pramlintide), alpha-

melanocyte stimulating hormone (MSH), cocaine- and amphetamine-regulated transcript (CART), neuropeptide Y receptor Y1 (NPY1) antagonists, neuropeptide Y receptor Y5 (NPY5) antagonists, neurotensin S, neuropeptide B, neuropeptide W, ghrelin, bombesin-like receptor 3 (BRS3), galanin, cholecystokinin (CCK), orexin, melanin-concentrating hormone (MCH), oxytocin, and stresscopin.

24. The use of claim 23, wherein the therapeutic peptide is oxyntomodulin comprising the polypeptide sequence of SEQ ID NO:24.

25. The use of claim 16, wherein the pharmaceutical composition is to be administered in combination with at least one additional agent.

26. The use of claim 25, wherein the additional agent is a glucagon-like-peptide-1 receptor modulator.

27. The use of claim 16, wherein the pharmaceutical composition is to be administered in combination with liraglutide or dulaglutide.

28. Use of a pharmaceutical composition comprising a conjugate comprising: a. a monoclonal antibody, wherein the monoclonal antibody comprises a heavy chain complementarity determining region 1 (HCDR1), a HCDR2, a HCDR3, a light chain complementarity determining region 1 (LCDR1), a LCDR2, and a LCDR3 having the polypeptide sequences of SEQ ID NO:16, 17, 18, 19, 20, and 21, respectively; and b. two different pharmaceutically active moieties; and a pharmaceutically acceptable carrier, in the manufacture of a medicament for reducing food intake or for the treatment of a disease or disorder in a subject in need thereof, wherein said disease or disorder is selected from the group consisting of obesity, type II diabetes, metabolic syndrome, insulin resistance, impaired glucose tolerance, hyperglycemia, hyperinsulinemia, hypertriglyceridemia, dyslipidemia, atherosclerosis, diabetic nephropathy, hypertension, non-alcoholic fatty liver disease (NAFLD), and non-alcoholic steatohepatitis (NASH), and wherein an effective amount of the pharmaceutical composition is to be administered to the subject.

29. The use of claim 28, wherein the monoclonal antibody comprises a heavy chain variable domain (VH) having the polypeptide sequence of SEQ ID NO:12, and a light chain variable domain (VL) having the polypeptide sequence of SEQ ID NO:14.

30. The use of claim 29, wherein the monoclonal antibody further comprises a Fc portion.

31. The method of claim 30, wherein the monoclonal antibody comprises a heavy chain (HC) having the polypeptide sequence of SEQ ID NO:13, and a light chain (LC) having the polypeptide sequence of SEQ ID NO:15.

32. The use of claim 28, wherein the two different pharmacologically active moieties are therapeutic peptides.

33. The use of claim 32, wherein each of the therapeutic peptides is conjugated to the monoclonal antibody at the cysteine residue of the polypeptide sequence of SEQ ID NO:18.

34. The use of claim 32, wherein each of the therapeutic peptides is conjugated to the monoclonal antibody via a linker.

35. The use of claim 34, wherein the linker independently comprises a peptide linker, a hydrocarbon linker, a polyethylene glycol (PEG) linker, a polypropylene glycol (PPG) linker, a polysaccharide linker, a polyester linker, or a hybrid linker consisting of PEG and an embedded heterocycle.

36. The use of claim 32, wherein the therapeutic peptides are selected from the group consisting of oxyntomodulin, glucagon-like peptide 1 (GLP1), exendin (exenatide), amylin (pramlintide), alpha-melanocyte stimulating hormone (MSH), cocaine- and amphetamine-regulated transcript (CART), neuropeptide Y receptor Y1 (NPY1) antagonists, neuropeptide Y receptor Y5 (NPY5) antagonists, neurotensin S, neuropeptide B, neuropeptide W, ghrelin, bombesin-like receptor 3 (BRS3), galanin, cholecystokinin (CCK), orexin, melanin-concentrating hormone (MCH), oxytocin, and stresscopin.

37. The use of claim 28, wherein the pharmaceutical composition is to be administered in combination with at least one additional agent.

38. The use of claim 37, wherein the additional agent is a glucagon-like-peptide-1 receptor modulator.
39. The use of claim 28, wherein the pharmaceutical composition is to be administered in combination with liraglutide or dulaglutide.
40. A pharmaceutical composition comprising:  
a conjugate comprising:  
a. a monoclonal antibody, wherein the monoclonal antibody comprises a heavy chain variable domain (VH) having the polypeptide sequence of SEQ ID NO:12, and a light chain variable domain (VL) having the polypeptide sequence of SEQ ID NO:14; and  
b. at least one pharmacologically active moiety; and a pharmaceutically acceptable carrier,  
for use in therapy.
41. A pharmaceutical composition comprising:  
a conjugate comprising:  
a. a monoclonal antibody, wherein the monoclonal antibody comprises a heavy chain complementarity determining region 1 (HCDR1), a HCDR2, a HCDR3, a light chain complementarity determining region 1 (LCDR1), a LCDR2, and a LCDR3 having the polypeptide sequences of SEQ ID NO:16, 17, 18, 19, 20, and 21, respectively; and  
b. two different pharmaceutically active moieties; and a pharmaceutically acceptable carrier,  
for use in therapy.