28. The peptide of claim 27, wherein the heterologous moiety is a protein, a peptide, a protein domain, a linker, an organic polymer, an inorganic polymer, a polyethylene glycol (PEG), biotin, an albumin, a human serum albumin (HSA), a HSA FcRn binding portion, an antibody, a domain of an antibody, an antibody fragment, a single chain antibody, a domain antibody, an albumin binding domain, an enzyme, a ligand, a receptor, a binding peptide, a non-FnIII scaffold, an epitope tag, a recombinant polypeptide polymer, a cytokine, or a combination of two or more of the recited moieties.

29. A pharmaceutical composition comprising the peptide of any one of claims 1 to 28, and a carrier.

30. A kit comprising the composition of claim 29.

31. A method of treating or preventing a disease or condition caused or characterized by excess body weight, comprising administering to a subject in need of treatment an effective amount of the peptide of any one of claims 1 to 28 or the composition of claim 29.

32. The method of claim 31, wherein the disease or condition is obesity.

33. The method of claim 31, wherein the disease or condition is type 2 diabetes.

34. The method of any one of claims 30 to 33, wherein the peptide is administered by injection.

35. The method of claim 34, wherein the injection is administered subcutaneously.

36. The method of claim 34 or claim 35, wherein the peptide is administered once per day.

37. The method of any one of claims 29 to 36, wherein the subject is human.

38. A method of reducing body weight in a subject comprising administering to a subject in need of treatment an effective amount of the peptide of any one of claims 1 to 28 or the composition of claim 29.