CLAIM(S):

1. A polynucleotide encoding a polypeptide selected from the group consisting of:

(a) a polypeptide of sequence selected from the group consisting of SEQ ID NO:78, SEQ ID NO:81, SEQ ID NO:84, SEQ ID NO:87, SEQ ID NO:92, SEQ ID NO:95, SEQ ID NO:98, SEQ ID NO:101, SEQ ID NO:106, SEQ ID NO:109, SEQ ID NO:114, SEQ ID NO:119, SEQ ID NO:124, SEQ ID NO:127, SEQ ID NO:132, SEQ ID NO:137 and SEQ ID NO:140;

(b) a polypeptide having at least 95% sequence identity to the polypeptide sequence selected from the group consisting of SEQ ID NO:78, SEQ ID NO:81, SEQ ID NO:84, SEQ ID NO:87, SEQ ID NO:92, SEQ ID NO:95, SEQ ID NO:98, SEQ ID NO:101, SEQ ID NO:106, SEQ ID NO:109, SEQ ID NO:114, SEQ ID NO:119, SEQ ID NO:124, SEQ ID NO:127, SEQ ID NO:132, SEQ ID NO:137 and SEQ ID NO:140; and

(c) a polypeptide of sequence modified from the polypeptide sequence selected from the group consisting of SEQ ID NO:78, SEQ ID NO:81, SEQ ID NO:84, SEQ ID NO:87, SEQ ID NO:92, SEQ ID NO:95, SEQ ID NO:98, SEQ ID NO:101, SEQ ID NO:106, SEQ ID NO:109, SEQ ID NO:114, SEQ ID NO:119, SEQ ID NO:124, SEQ ID NO:127, SEQ ID NO:132, SEQ ID NO:137 and SEQ ID NO:140 by deletion, insertion, substitution, or addition of no more than 6 amino acids,

wherein the encoded polypeptide has a sweet-taste modulation activity and is not the polypeptide of SEQ ID NO:3.

2. The polynucleotide of claim 1, wherein the encoded polypeptide is the polypeptide having at least 99% sequence identity with the polypeptide of SEQ ID NO:78, SEQ ID NO:81, SEQ ID NO:84, SEQ ID NO:87, SEQ ID NO:92, SEQ ID NO:95, SEQ ID NO:98, SEQ ID NO:101, SEQ ID NO:106, SEQ ID NO:109, SEQ ID NO:114, SEQ ID NO:119, SEQ ID NO:124, SEQ ID NO:127, SEQ ID NO:132, SEQ ID NO:137 or SEQ ID NO:140.

3. The polynucleotide of claim 1, wherein the encoded polypeptide is the polypeptide having at least 99% sequence identity with the polypeptide of SEQ ID NO:95, SEQ ID NO:98, SEQ ID NO:101, SEQ ID NO:119, SEQ ID NO:124, SEQ ID NO:132, SEQ ID NO:137, or SEQ ID NO:140.

4. The polynucleotide of claim 1 having a nucleotide sequence selected from the group consisting of SEQ ID NO:120, SEQ ID NO:121, SEQ ID NO:122, SEQ ID NO:123, SEQ ID NO:138, SEQ ID NO:139, SEQ ID NO:93, SEQ ID NO:94, SEQ ID NO:115, SEQ ID NO:116, SEQ ID NO:117,

SEQ ID NO:118, SEQ ID NO:99, SEQ ID NO:100, SEQ ID NO:96, SEQ ID NO:97, SEQ ID NO:133, SEQ ID NO:134, SEQ ID NO:135, SEQ ID NO:136, SEQ ID NO:128, SEQ ID NO:129, SEQ ID NO:130 and SEQ ID NO:131, wherein in each of the listed SEQ ID NOs the sequence encoding the histidine tag is excluded.

5. The polynucleotide of claim 1 having a nucleotide sequence selected from the group consisting of SEQ ID NO:120, SEQ ID NO:121, SEQ ID NO:122, SEQ ID NO:123, SEQ ID NO:138, SEQ ID NO:139, SEQ ID NO:93, SEQ ID NO:94, SEQ ID NO:115, SEQ ID NO:116, SEQ ID NO:117, SEQ ID NO:118, SEQ ID NO:99, SEQ ID NO:100, SEQ ID NO:96, SEQ ID NO:97, SEQ ID NO:133, SEQ ID NO:134, SEQ ID NO:135, SEQ ID NO:136, SEQ ID NO:128, SEQ ID NO:129, SEQ ID NO:130 and SEQ ID NO:131, wherein in each of the listed SEQ ID NOs the sequence encoding the histidine tag is included.

6. The polynucleotide of any one of claims 1-5, wherein the encoded polypeptide has the N-terminal amino acid sequence of SEQ ID NO: 4.

7. The polynucleotide of any one of claims 1-6, operably linked to a heterologous regulatory element.

8. The polynucleotide of any one of claims 1-6, wherein the polynucleotide encodes or further encodes a protein tag.

9. The polynucleotide of any one of claims 1-6, wherein the polynucleotide encodes or further encodes a histidine tag.

10. An expression cassette comprising the polynucleotide of any one of claims 1-9.

11 A vector comprising the polynucleotide of any one of claims 1-9.

12. A host cell transformed with an expression cassette or a vector comprising the polynucleotide of any one of claims 1-9.

13. A host cell expressing the polynucleotide of any one or claims 1-9.

14. A method of producing a protein having sweet-taste modulation activity comprising:

culturing the host cell of claim 12 or 13 in a medium under conditions for protein expression.

15. The method of claim 14, wherein the encoded polypeptide is a polypeptide having at least 99% sequence identity with the polypeptide of SEQ ID NO:95, SEQ ID NO:98, SEQ ID NO:101, SEQ ID NO:119, SEQ ID NO:124, SEQ ID NO:132, SEQ ID NO:137, or SEQ ID NO:140.

16. The method of claim 14, wherein the encoded polypeptide is the polypeptide of SEQ ID NO:95, SEQ ID NO:98, SEQ ID NO:101, SEQ ID NO:119, SEQ ID NO:124, SEQ ID NO:132, SEQ ID NO:137, or SEQ ID NO:140.

17. A polypeptide having sweet-taste modulation activity comprising:

(a) a polypeptide sequence selected from the group consisting of SEQ ID NO:78, SEQ ID NO:81, SEQ ID NO:84, SEQ ID NO:87, SEQ ID NO:92, SEQ ID NO:95, SEQ ID NO:98, SEQ ID NO:101, SEQ ID NO:106, SEQ ID NO:109, SEQ ID NO:114, SEQ ID NO:119, SEQ ID NO:124, SEQ ID NO:127, SEQ ID NO:132, SEQ ID NO:137 and SEQ ID NO:140;

(b) a polypeptide having at least 95% sequence identity to the polypeptide sequence selected from the group consisting of SEQ ID NO:78, SEQ ID NO:81, SEQ ID NO:84, SEQ ID NO:87, SEQ ID NO:92, SEQ ID NO:95, SEQ ID NO:98, SEQ ID NO:101, SEQ ID NO:106, SEQ ID NO:109, SEQ ID NO:114, SEQ ID NO:119, SEQ ID NO:124, SEQ ID NO:127, SEQ ID NO:132, SEQ ID NO:137 and SEQ ID NO:140 (c) a polypeptide of sequence modified from the polypeptide sequence selected from the group consisting of SEQ ID NO:3, SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:13, SEQ ID NO:14, SEQ ID NO:15, SEQ ID NO:16, SEQ ID NO:17, SEQ ID NO:78, SEQ ID NO:81, SEQ ID NO:84, SEQ ID NO:87, SEQ ID NO:92, SEQ ID NO:95, SEQ ID NO:98, SEQ ID NO:101, SEQ ID NO:106, SEQ ID NO:109, SEQ ID NO:114, SEQ ID NO:119, SEQ ID NO:124, SEQ ID NO:127, SEQ ID NO:132, SEQ ID NO:137, and SEQ ID NO:140SEQ ID NO:78, SEQ ID NO:81, SEQ ID NO:84, SEQ ID NO:87, SEQ ID NO:92, SEQ ID NO:95, SEQ ID NO:98, SEQ ID NO:101, SEQ ID NO:106, SEQ ID NO:109, SEQ ID NO:114, SEQ ID NO:119, SEQ ID NO:124, SEQ ID NO:127, SEQ ID NO:132, SEQ ID NO:137 and SEQ ID NO:140

by deletion, insertion, substitution, or addition of no more than 6 amino acids, and wherein

the polypeptide is not the polypeptide of SEQ ID NO:3.

18. The polypeptide of claim 17 having at least 99% sequence identity with a polypeptide sequence selected from the group consisting of SEQ ID NO:78, SEQ ID NO:81, SEQ ID NO:84, SEQ ID NO:87, SEQ ID NO:92, SEQ ID NO:95, SEQ ID NO:98, SEQ ID NO:101, SEQ ID NO:106, SEQ ID NO:109, SEQ ID NO:114, SEQ ID NO:119, SEQ ID NO:124, SEQ ID NO:127, SEQ ID NO:132, SEQ ID NO:137 and SEQ ID NO:140.

19. The polypeptide of claim 17 having at least 99% sequence identity with the polypeptide of SEQ ID NO:95, SEQ ID NO:98, SEQ ID NO:101, SEQ ID NO:119, SEQ ID NO:124, SEQ ID NO:132, SEQ ID NO:137, or SEQ ID NO:140.

20. The polypeptide of claim 17 which is the polypeptide of SEQ ID NO:95, SEQ ID NO:98, SEQ ID NO:101, SEQ ID NO:119, SEQ ID NO:124, SEQ ID NO:132, SEQ ID NO:137, or SEQ ID NO:140.

21. A composition, comprising:

(a) a product for oral administration, wherein the product differs from *Mattirolomyces terfezioides* truffle, and

(b) a sweetening composition comprising a polypeptide of any one of claims 17-20,

wherein the combination has enhanced sweet taste compared to the product for oral administration.

22. The composition of claim 21, wherein the composition comprises a plurality of polypeptides.

23. The composition of claim 21 or 22, wherein the product for oral administration is a food, a beverage, a dietary supplement composition, or a pharmaceutical composition.

24. The composition of any one of claims 20-23, wherein the product for oral administration is a food product selected from the group consisting of baked goods; sweet bakery products, pre-made sweet bakery mixes for preparing sweet bakery products; pie fillings and other sweet fillings, gelatins and puddings; frozen desserts; yogurts; snack bars; bread products; pre-made bread mixes for preparing bread products; sauces, syrups and dressings; sweet spreads; confectionary products; and sweetened breakfast cereals or a beverage product selected from the group consisting of carbonated beverages, non-carbonated beverages; and beverage concentrates.

25. A method for modulating the taste of a product for oral administration, comprising:

combining a product for oral administration with an effective amount of a sweetening composition comprising a polypeptide of any one of claims 17-19,

wherein the product for oral administration differs from *Mattirolomyces terfezioides* truffle and the combination has enhanced sweet taste compared to the product for oral administration.

26. The method of claim 25, wherein the product for oral administration is a food, a beverage, a dietary supplement composition, or a pharmaceutical composition.

27. The method of claim 25, wherein the product for oral administration is a food product selected from the group consisting of baked goods; sweet bakery products, pre-made sweet bakery mixes for preparing sweet bakery products; pie fillings and other sweet fillings, gelatins and puddings; frozen desserts; yogurts; snack bars; bread products; pre-made bread mixes for preparing bread products; sauces, syrups and dressings; sweet spreads; confectionary products; and sweetened breakfast cereals or beverage product selected from the group consisting of carbonated beverages; non-carbonated beverages; and beverage concentrates.