CLAIMS

What is claimed is:

1. An engineered host cell for expressing a heterologous protein, said engineering host cell comprising at least three different expression cassettes integrated into the genome of the engineered host cell wherein;

a. a first expression cassette comprising a first promoter operably linked to a heterologous gene sequence encoding the heterologous protein

b. a second expression cassette comprising a second promoter operably linked to a heterologous gene sequence encoding the heterologous protein;

c. a third expression cassette comprising a third promoter operably linked to a helper factor sequence; and

d. a copy number ratio of the helper factor encoding sequence to the heterologous protein encoding sequence is at least 1:10.

2. The engineered host cell of claim 1, wherein the copy number ratio of the helper factor encoding sequence to the heterologous protein encoding sequence is at most 1:2.

3. The engineered host cell of claim 1, wherein the copy number ratio of the helper factor encoding sequence to the heterologous protein encoding sequence is at least 1:9, 1:8, 1:7, 1:6, 1:5, 1:4 or 1:3.

4. The engineered host cell of claim 1, wherein the copy number ratio of the helper factor encoding sequence to the heterologous protein encoding sequence is at most 1:9, 1:8, 1:7, 1:6, 1:5, 1:4, 1:3 or 1:2.

5. The engineered host cell of claim 1, wherein at least one promoter is an inducible promoter.

6. The engineered host cell of claim 5, wherein the inducible promoter is a methanol inducible promoter.

7. The engineered host cell of claim 1, wherein at least one promoter is a constitutive promoter.

8. The engineered host cell of claim 1, wherein the host cell comprises at least 2 copies of the first expression cassette.

9. The engineered host cell of claim 1, wherein the host cell comprises at least 2 copies of the second expression cassette.

10. The engineered host cell of claim 1, wherein the host cell comprises at least 1 copy of a fourth expression cassette comprising a fourth promoter operably linked to the heterologous gene sequence.

11. The engineered host cell of claim 1, wherein the first cassette and the second cassette are integrated into the genome in the same 5' to 3' orientation.

12. The engineered host cell of claim 1, wherein the first cassette and the second cassette are integrated into the genome in an opposite 5' to 3' orientation.

13. The engineered host cell of claim 1, wherein the host cell comprises at least 2 copies of the helper factor encoding sequence in 1 or 2 expression cassettes.

14. The engineered host cell of claim 1, wherein the heterologous protein is a food-related protein.

15. The engineered host cell of claim 14, wherein the food-related protein comprises an enzyme, a nutritive protein, a food ingredient or a food additive.

16. The engineered host cell of claim 15, wherein the food-related protein comprises an egg-white protein.

17. The engineered host cell of claim 16, wherein the egg-white protein is ovomucoid.

18. The engineered host cell of claim 17, wherein a copy number ratio of the helper factor encoding sequence to ovomucoid encoding sequence is from 1:3 to 1:6.

19. The engineered host cell of claim 16, wherein the egg-white protein is ovalbumin.

20. The engineered host cell of claim 19, wherein a copy number ratio of the helper factor encoding sequence to ovalbumin encoding sequence is from 1:3 to 1:8.

21. The engineered host cell of claim 1, wherein the engineered host cell is capable of producing at least about 5 g per liter of the heterologous protein under fermentation conditions.

22. The engineered host cell of claim 1, wherein each of the helper factor gene sequences encodes for a protein independently selected from the group consisting of HAC1, Serine/threonine protein kinase 2 (Kin2), squalene synthase (ERG9), protein disulfide isomerase 1 (PDI1), SSA1, SSA4, SSB1, SSE1, BiP, ER Membrane Protein Complex Subunit 1 (EMC1), YNL181W oxidoreductase, integral membrane protein zinc metalloprotease Ste24, 14-3-3 protein Bmh2 and ER oxidoreductin 1 (Ero1).

23. The engineered host cell of claim 1, wherein the host cell is engineered to favor non-homologous integration over homologous integration and/or the host cell is selected based on a greater number of non-homologous integrations than homologous integrations.

24. The engineered host cell of claim 1, wherein at least two of the expression cassettes comprising the heterologous gene sequence integrate at different integration sites.

25. The engineered host cell of claim 1, wherein the host cell is a yeast cell.