

1 File Name: Supplementary Data 1
2 Description: Extended metabolic reactions for precursor synthesis in the secretory pathway
3
4 File Name: Supplementary Data 2
5 Description: Proteins in the pcSecYeast
6
7 File Name: Supplementary Data 3
8 Description: Reactions in the pcSecYeast
9
10 File Name: Supplementary Data 4
11 Description: Metabolites in the pcSecYeast
12
13 File Name: Supplementary Data 5
14 Description: Direct costs and unit secretory costs for all 497 secretory/cell membrane proteins
15
16 File Name: Supplementary Data 6
17 Description: Protein information for all *S. cerevisiae* proteins
18
19 File Name: Supplementary Data 7
20 Description: Recombinant protein information
21
22 File Name: Supplementary Data 8
23 Description: Predicted results for Insulin precursor
24
25 File Name: Supplementary Data 9
26 Description: Predicted results for α -amylase
27
28 File Name: Supplementary Data 10
29 Description: Predicted results for β -glucosidase
30
31 File Name: Supplementary Data 11
32 Description: Predicted results for Hemoglobin
33
34 File Name: Supplementary Data 12
35 Description: Predicted results for Acid phosphatase
36
37 File Name: Supplementary Data 13
38 Description: Predicted results for Human serum albumin
39
40 File Name: Supplementary Data 14
41 Description: Predicted results for HumanTransferrin
42
43 File Name: Supplementary Data 15
44 Description: Predicted results for Human recombinant granulocyte colony stimulating factor

45

46 File Name: Supplementary Data 16

47 Description: Predicted results for Insulin precursor without disulfide bonds

48

49 File Name: Supplementary Data 17

50 Description: Experimental validation results for predicted overexpression targets of α -amylase
51 production

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53 File Name: Supplementary Data 18

54 Description: Collected mRNA data for α -amylase production strains

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