

Supplementary materials for:

Investigation of acid tolerance mechanism of *Acetobacter pasteurianus* under different concentrations of substrate acetic acid based on 4D label-free proteomic analysis

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Supplementary Tables

Table S1. Growth of *Acetobacter pasteurianus* in 24 hours under different concentrations of the substrate acetic acid

Time (h)	acid					
	OD ₆₀₀			Increased acetic acid (g/100mL)		
	0	3%	6%	0	3%	6%
6	0.003±0.0015 ^d	0.003±0.0015 ^c	0.003±0.0010 ^a	0.02±0.0058 ^d	0.01±0.0144 ^c	0.02±0.0115 ^a
12	0.051±0.0062 ^c	0.003±0.0015 ^c	0.003±0.0012 ^a	0.13±0.0265 ^c	0.02±0.0058 ^c	0.02±0.0058 ^a
18	0.487±0.0305 ^b	0.147±0.0126 ^b	0.004±0.0010 ^a	0.45±0.0351 ^b	0.21±0.0200 ^b	0.01±0.0058 ^a
24	0.618±0.0195 ^a	0.205±0.0282 ^a	0.003±0.0020 ^a	0.50±0.0115 ^a	0.40±0.0404 ^a	0.01±0.0058 ^a

Table S2. The proteins enriched in the ribosome KEGG pathway of each comparison group.

Protein accession	Protein description	Gene name	P3-L/P0-L Fold change	Regulated type	P6-L/P0-L Fold change	Regulated type	P3-E/P0-E Fold change	Regulated type	P6-E/P0-E Fold change	Regulated type
fig_HN.1092	Small ribosomal subunit protein bS20	rpsT	1.27		1.55	up	1.49		2.54	up
fig_HN.1320	Large ribosomal subunit protein bL20	rplT	0.83		0.40	down	1.05		1.51	up
fig_HN.1321	Large ribosomal subunit protein bL35	rpmI	1.18		2.49	up	1.04		3.27	up
fig_HN.1362	Small ribosomal subunit protein bS18	rpsR	1.23		1.54	up	1.44		1.57	up
fig_HN.1408	Large ribosomal subunit protein bL17	rplQ	1.40		1.87	up	1.20		1.74	up
fig_HN.1414	Large ribosomal subunit protein uL15	rplO	1.52	up	2.10	up	1.37		1.76	up
fig_HN.1416	Small ribosomal subunit protein uS5	rpsE	1.08		0.97		1.43		2.22	up
fig_HN.1417	Large ribosomal subunit protein uL18	rplR	1.51	up	3.22	up	1.68	up	2.21	up
fig_HN.1418	Large ribosomal subunit protein uL6	rplF	1.41		2.24	up	1.29		1.58	up
fig_HN.1423	Large ribosomal subunit protein uL14	rplN	1.56	up	2.15	up	1.36		1.70	up
fig_HN.1424	Small ribosomal subunit protein uS17	rpsQ	1.27		1.71	up	1.37		1.53	up
fig_HN.1426	Large ribosomal subunit protein uL16	rplP	1.11		1.15		1.48		2.14	up
fig_HN.1428	Large ribosomal subunit protein uL22	rplV	1.12		1.46		1.26		1.70	up
fig_HN.1430	Large ribosomal subunit protein uL2	rplB	0.77		0.33	down	1.68	up	3.34	up
fig_HN.1432	Large ribosomal subunit protein uL4	rplD	1.55	up	2.03	up	1.41		1.76	up
fig_HN.1433	Large ribosomal subunit protein uL3	rplC	1.04		1.27		1.14		1.51	up
fig_HN.1436	Small ribosomal subunit protein uS12	rpsL	1.00		0.68		1.17		2.57	up
fig_HN.1442	Large ribosomal subunit protein uL10	rplJ	1.34		1.80	up	1.35		1.62	up
fig_HN.2246	Large ribosomal subunit protein bL36	rpmJ	1.43		2.73	up	2.02	up	2.61	up
fig_HN.3263	Small ribosomal subunit protein bS16	rpsP	1.30		1.74	up	1.45		1.67	up
fig_HN.3266	Large ribosomal subunit protein bL19	rplS	1.35		1.92	up	1.15		1.54	up
fig_HN.3270	Small ribosomal subunit protein bS21	rpsU	0.86		0.56	down	1.49		2.36	up
fig_HN.3277	Large ribosomal subunit protein bL32	rpmF	1.17		2.43	up	0.61	down	0.44	down
fig_HN.3316	Large ribosomal subunit protein bL28	rpmB	1.23		1.93	up	1.55	up	1.76	up
fig_HN.3472	Small ribosomal subunit protein uS9	rpsI	1.31		1.58	up	1.42		1.86	up
fig_HN.3517	Small ribosomal subunit protein uS15	rpsO	1.44		1.68	up	1.22		1.67	up

Note: In each comparison group, only the proteins labeled with the type of regulation were significantly differentially expressed proteins.

Supplementary Figures

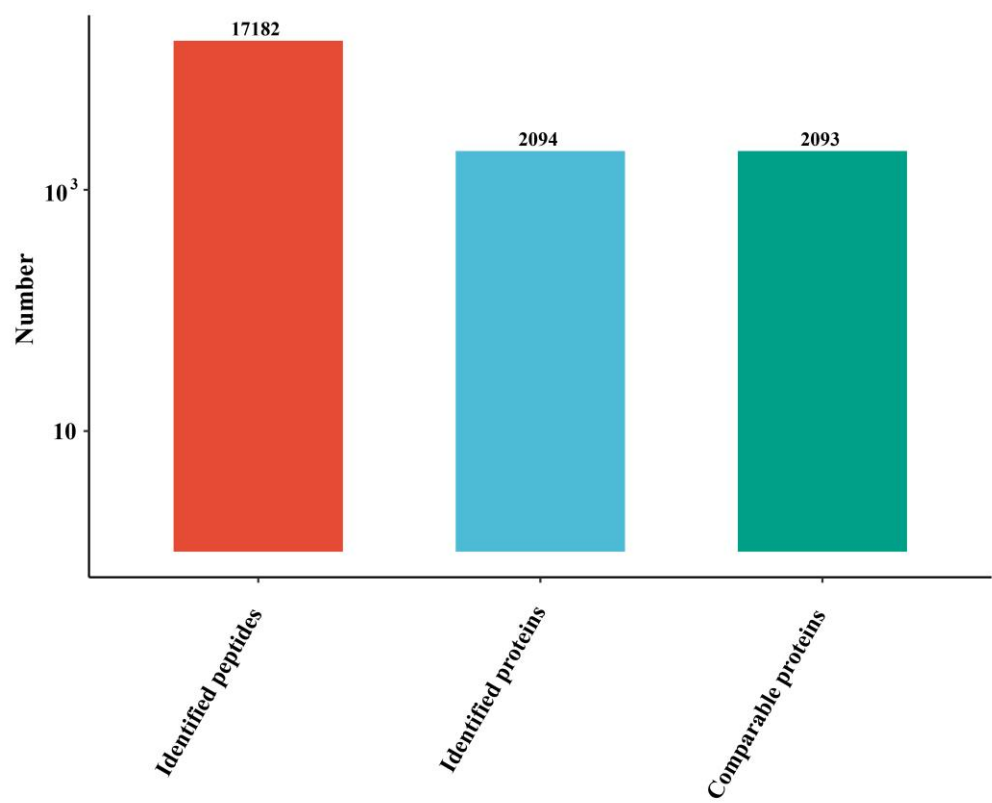
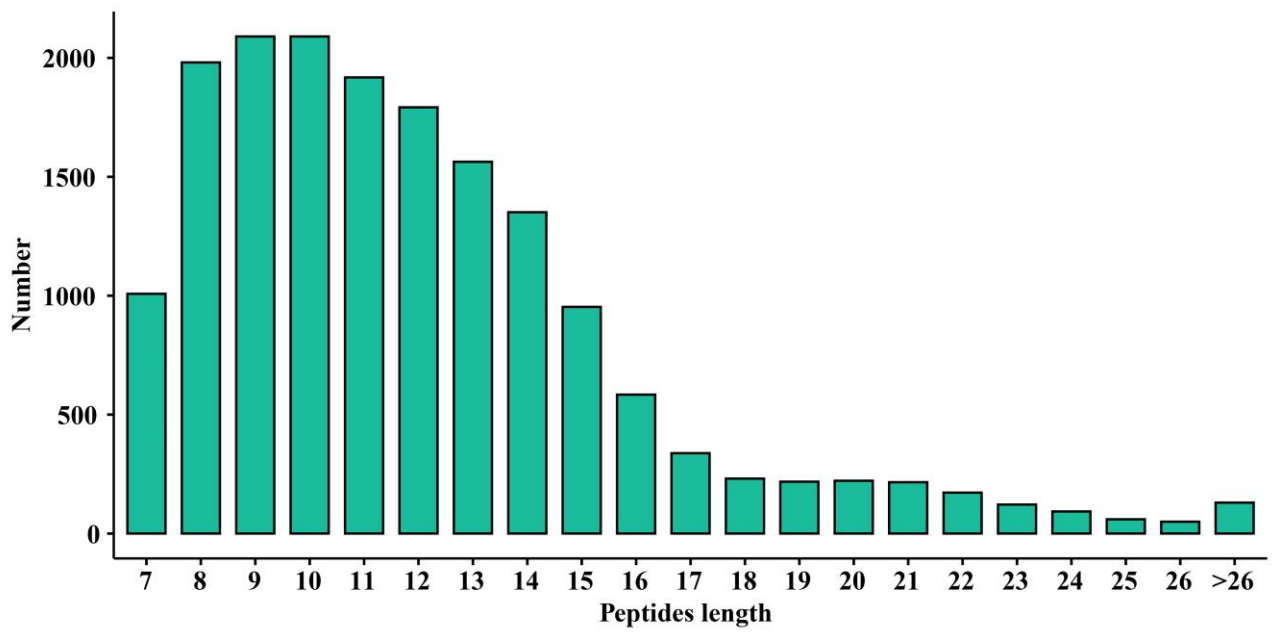


Figure S1. Overview of protein identification.

A



B

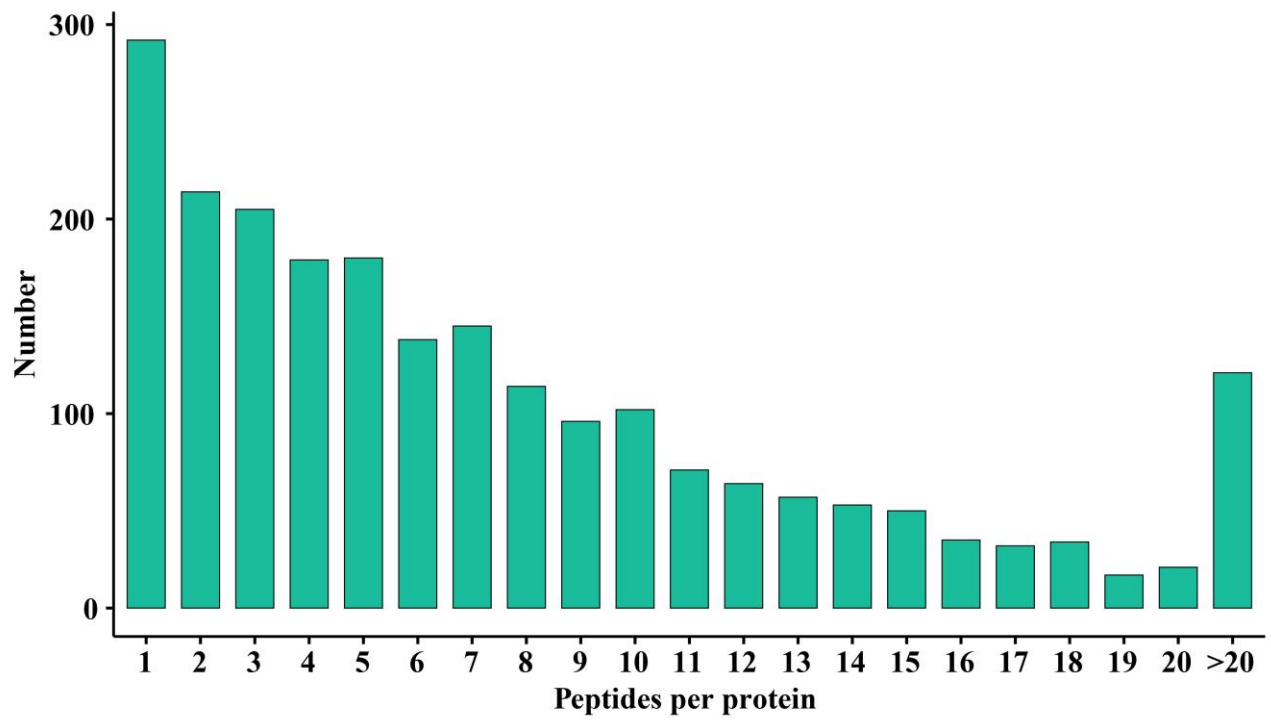


Figure S2. The distribution of peptides length (A) and peptides in proteins number (B).

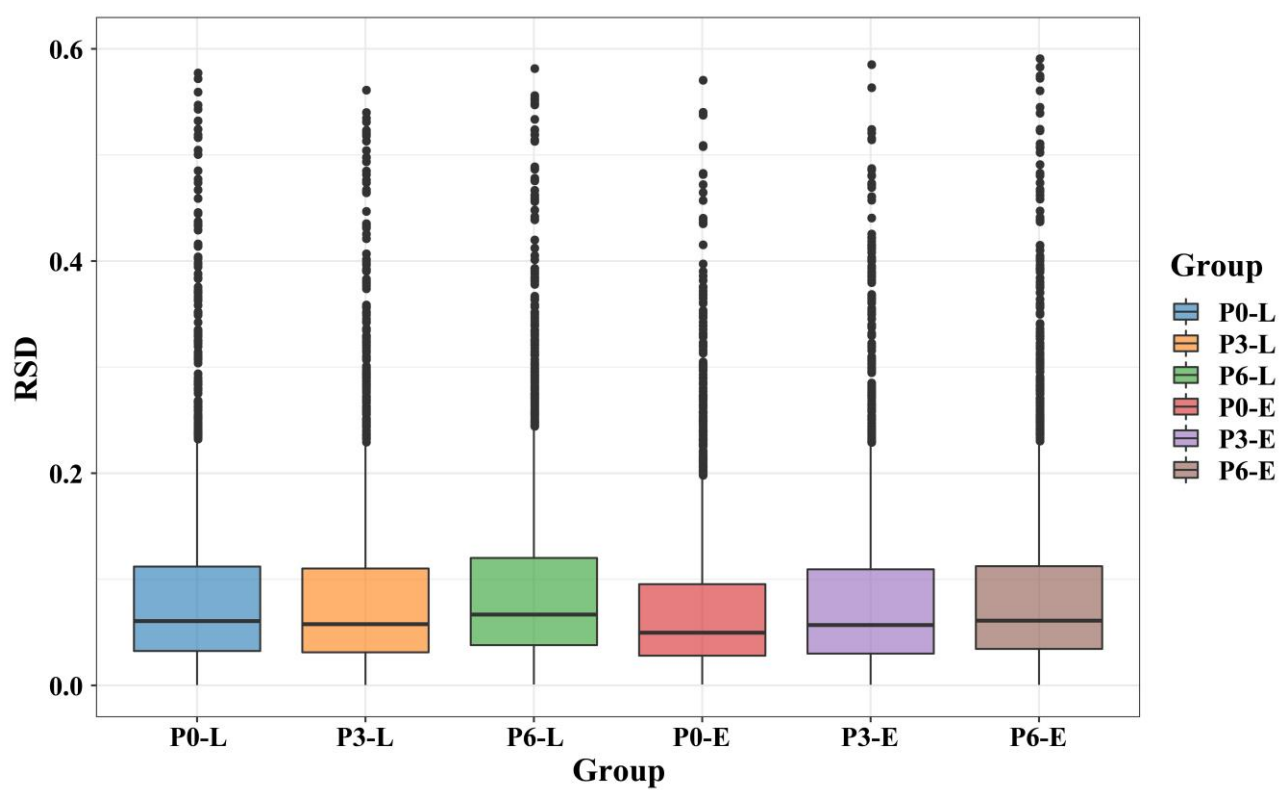


Figure S3. The relative standard deviation (RSD) analysis in different samples.