Table S1. Sequences of primer used in qRT-PCR assay

Gene	Gene product	Primer sequence (5'-3')
atpB	F0F1 ATP synthase subunit B	F: TACAAGGACCTCCAGGACATCATCG
		R: GTGGGTGTTCTGCGACAGGAAG
gadA	Glutamate decarboxylase	F: CAACGCCTACCAGTTCGTCCAC
		R: TCATGTTCTTGTCGCGGCACTC
arcA	Arginine deiminase	F: ACCTCGACGACTTCCTGTTGGG
		R: TGGTGGTAGATGGCCTCGTAGTG
pls	ε-PL synthase	F: CGCGACCTGTGTATCGAGAT
		R: CGAGGATGGACAGGTACAGC
16s rDNA	Reference gene	F: CGCAAGGCTAAAACTCAAAGGA
		R: AACCCAACATCTCACGACACGA

Table S2. Changes of intracellular fatty acid composition in the batch fermentation for ε-PL production by *S. albulus*

Fatty acid	Relative fatty acid content (%)											
	12 h			18 h			24 h			48 h		
	QLU58	AAE43	AAE89	QLU58	AAE43	AAE89	QLU58	AAE43	AAE89	QLU58	AAE43	AAE89
$C_{12:0}$	7.01±1.04	5.63±0.54	5.45±0.33	5.71±0.56	4.21±0.38	4.06±0.23	5.01±0.52	3.27±0.29	3.66±0.34	5.68±0.61	4.89±0.43	5.17±0.43
$C_{13:0}$	6.82±0.82	4.22±0.37	3.64±0.24	2.43±0.37	4.07±0.20	4.94±0.45	4.54±0.19	5.91±0.44	4.01±0.38	6.60±0.31	7.52±0.27	6.70±0.37
$C_{14:0}$	15.69±1.12	15.87±1.03	15.63±1.28	11.64±1.27	8.85±1.00	8.23±0.79	12.95±1.52	11.68±0.94	11.69±1.04	15.08±1.55	13.22±1.24	10.30±1.19
$C_{14:1}$	2.13±0.32	2.47±0.32	2.23±0.44	3.12±0.27	3.45±0.45	2.36±0.31	3.63±0.63	3.78±0.27	3.46±0.26	3.87±0.55	4.22±0.34	2.81±0.22
$C_{15:0}$	23.56±2.86	24.62±1.36	24.13±1.63	24.51±2.13	23.45±1.22	24.14±2.06	22.45±1.85	22.34±1.17	21.29±1.14	21.66±2.05	21.96±1.25	23.81±0.88
$C_{16:0}$	23.65±1.75	21.84±1.64	23.56±1.37	25.04±2.03	24.19±1.71	23.68±1.75	25.95±2.48	24.59±1.02	25.92±1.48	23.01±2.29	21.32±1.33	21.90±1.32
$C_{16:1}$	1.39±0.33	1.85±0.23	1.75±0.25	1.68±0.22	2.56±0.17	2.23±0.13	2.00±0.17	2.64±0.35	3.05±0.42	2.26±0.32	3.09±0.28	3.65±0.57
$C_{17:0}$	10.67±1.76	12.71±1.01	12.56±1.01	13.46±1.23	14.50±1.26	14.01±0.76	10.90±2.03	13.43±1.12	11.70±1.24	9.06±1.17	10.64±1.33	12.28±0.83
$C_{18:0}$	5.87±0.38	7.32±0.36	6.92±0.39	8.21±0.46	10.50±0.24	11.04±0.57	7.72±0.52	7.05±0.27	9.71±0.48	7.22±0.45	7.67±0.31	6.67±0.34

$C_{18:1}$	3.20±0.21	3.45±0.25	4.12±0.28	4.20±0.17	4.21±0.41	5.30±0.33	4.86±0.35	5.31±0.35	5.51±0.33	5.56±0.22	5.47±0.37	6.71±0.45