

Supplementary Material for:

**Phenotypic and Transcriptomic Characterization of *Bacillus subtilis*
Mutants with Grossly Altered Membrane Composition**

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Figure S1. Analysis of lipid composition of WT and Q mutant strains by 2D TLC

Table S1: FAME analysis of *B. subtilis* and selected mutant strains

Table S2,S3, and S4: Annotated results of DNA microarray analyses

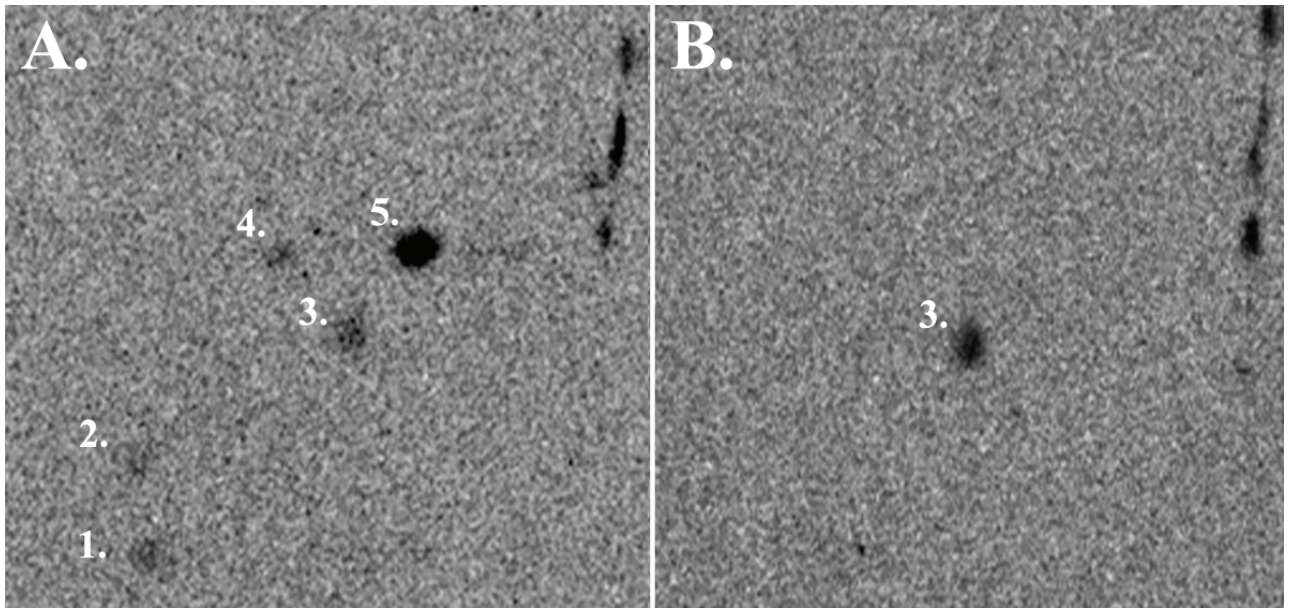


FIG. S1. Two-dimensional TLC analysis of membrane mutants. Cells of the wild-type (A) and the quadruple mutant (B) were grown in LB and labeled with 0.05 μCi of [2- ^{14}C]acetic acid per ml for 4-5 hours. Lipids were extracted and separated by 2D-TLC first using the solvent mixture chloroform/methanol/water (65:25:4 v/v), and then using the solvent mixture chloroform/acetic acid/methanol/water (80:15:12:4 v/v). Spots were identified by comparison to lipid profiles of single mutants. 1: LPG, 2: unknown, 3: PG, 4: unknown, 5: PE.

Table S1. FAME analysis of *Bacillus subtilis* and isogenic mutant strains altered in membrane composition.

Fatty Acid	Percent of total			
	Wild-Type	<i>ugtP</i>	MPY	UPMY
10:00	0.28	0.1		
12:00	0.24	0.11	0.19	0.22
13:0 iso	0.2	0.1	0.18	----
13:0 anteiso		0.07		
14:0 iso	2.3	0.53	1.6	0.56
14:00	0.76	0.31	0.57	0.56
15:0 iso	19.46	14.54	20.48	16.73
15:0 anteiso	38.16	39.8	38.96	40.29
15:00	0.55	0.13	0.35	0.18
16:1 w7c alcohol	0.24			
16:0 iso	6.28	2.62	5.04	2.55
16:1 w11c	0.65	0.09		
16:1 w5c		0.08		
16:00	6.32	3.47	5.13	4.63
17:1 iso w10c	0.52	0.15		
17:0 iso	10.02	14.68	12.36	14.12
17:0 anteiso	11.32	21.19	13.51	18.12
17:00	0.22	0.09	0.14	
18:0 iso	0.16	0.13		
18:1 w9c	0.6	0.21	0.49	0.49
18:1 w7c	0.16	0.09		
18:00	0.65	0.6	0.57	0.72
17:0 iso 3OH		0.06		
17:0 2OH	0.1	0.09		
19:0 iso		0.21		0.17
19:0 anteiso		0.3		0.22