Role of the Rcs Phosphorelay in Intrinsic Resistance to Penicillin, Phosphomycin, and Cefsulodin in *Escherichia coli* K12

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SUPPLEMENTAL MATERIAL

Strain **WT new** Antibiotic **Penicillin**

µg/mL	100	50	25	12.5	6.3	3.1	1.6	0.8	0.4	0.2	0.1	0.0
0.00	0.00	**0.13**	0.32	0.45	0.42	0.40	0.35	0.36	0.36	0.38	0.37
0.00	0.01	**0.20**	0.29	0.44	0.32	0.39	0.33	0.35	0.32	0.41	0.40
0.00	0.00	**0.19**	0.43	0.32	0.35	0.32	0.44	0.29	0.35	0.34	0.42
0.00	-0.01	**0.36**	0.38	0.45	0.47	0.54	0.55	0.43	0.47	0.53	0.64
-0.01	-0.01	**0.36**	0.33	0.38	0.49	0.50	0.60	0.48	0.47	0.50	0.59
-0.01	0.00	**0.30**	0.34	0.38	0.49	0.43	0.47	0.45	0.45	0.48	0.56
-0.01	-0.01	-0.01	**0.43**	0.48	0.50	0.47	0.50	0.48	0.46	0.45	0.45
0.00	0.00	**0.22**	0.29	0.38	0.30	0.40	0.39	0.46	0.52	0.47	0.44
0.02	0.02	**0.19**	0.28	0.42	0.38	0.39	0.37	0.51	0.39	0.37	0.41

Strain ***ΔrcsB* new** Antibiotic **Penicillin**

µg/mL	100	50	25	12.5	6.3	3.1	1.6	0.8	0.4	0.2	0.1	0.0
0.00	0.00	-0.01	**0.37**	0.33	0.41	0.33	0.38	0.36	0.35	0.38	0.35
-0.01	0.00	0.00	**0.31**	0.48	0.35	0.43	0.34	0.33	0.34	0.37	0.38
0.00	0.01	0.00	**0.30**	0.37	0.31	0.41	0.39	0.35	0.33	0.36	0.40
0.00	0.00	**0.22**	0.27	0.34	0.38	0.42	0.46	0.45	0.43	0.39	0.53
0.00	0.00	**0.29**	0.30	0.37	0.36	0.36	0.40	0.40	0.42	0.38	0.52
0.00	0.01	**0.32**	0.34	0.37	0.35	0.33	0.36	0.34	0.32	0.44	0.48
-0.02	-0.03	-0.03	**0.39**	0.27	0.27	0.26	0.27	0.50	0.30	0.30	0.37
-0.02	-0.02	-0.01	**0.37**	0.26	0.27	0.19	0.25	0.31	0.31	0.31	0.42
-0.01	-0.01	**0.23**	0.28	0.26	0.28	0.23	0.34	0.31	0.37	0.37	0.36

FIG. S1 Cumulative OD_{600} values of WT new and Δ*rcsB* new strains incubated with a concentration gradient of penicillin. Each box represents a well and the numbers represent the OD_{600} value obtained from a Nanodrop 200C spectrophotometer. Shades of green indicates relative OD_{600} levels, where darker shades indicate higher levels. Yellow indicates no bacterial growth. Bolded OD_{600} values indicates our interpretation of the highest concentration of penicillin where bacteria grew. Therefore, the corresponding MIC for our WT new strains on penicillin is interpreted to be 50 µg/mL, with 8 of 9 replicates agreeing. The corresponding MIC for our Δ*rcsB* NEW strain is around 25-50 µg/mL where 5 of 9 replicates show a MIC of 25 µg/mL, and 4 of 9 replicates show a MIC of 50 µg/mL.