Figure S1. Standardized biofilm formation in ASW medium at 23 h in CUKW and KCC01.

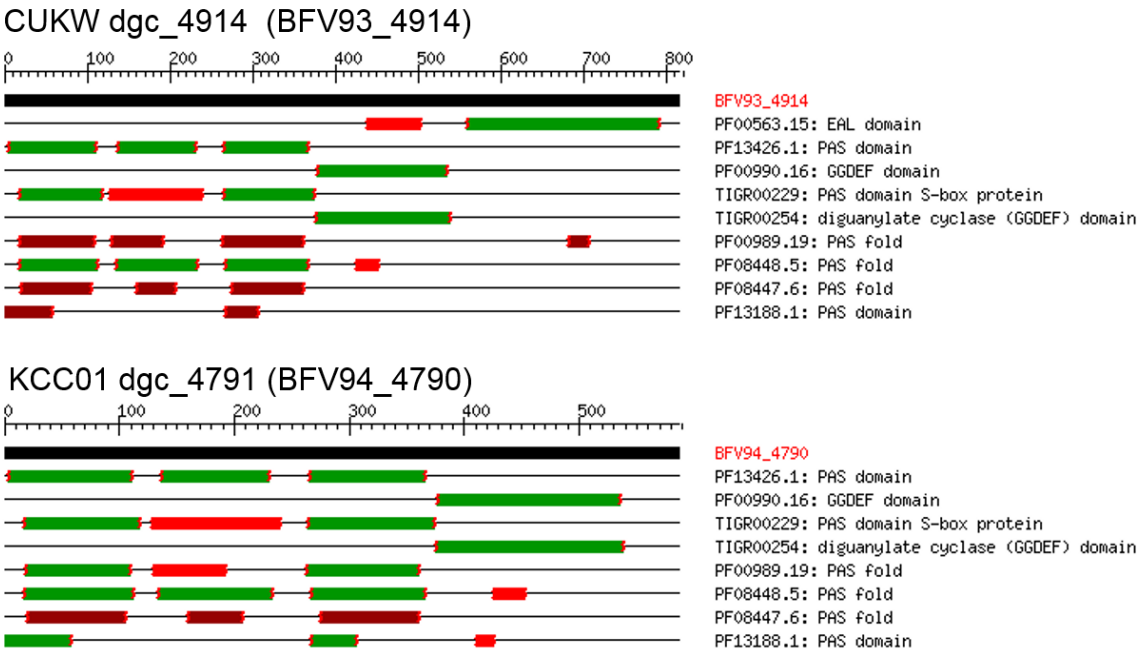

Figure S2. Comparative domain analysis of diguanylate cyclase gene (dgc_4914) found to be lacking EAL domain in KCC01.

Table S1. BestKeeper analysis for +Cu (n=10).

Target	gyrB	inf2	pfk	maf
geo Mean [CT]	23.26	20.92	26.97	23.97
ar Mean [CT]	23.28	20.93	26.98	23.98
min [CT]	22.18	19.92	26.44	23.22
max [CT]	24.97	22.30	28.08	25.44
std dev [± CT]	0.72	0.60	0.40	0.50
CV [% CT]	3.10	2.89	1.48	2.10
min [x-fold]	-2.12	-2.01	-1.45	-1.69
max [x-fold]	3.27	2.60	2.16	2.77
std dev [± x-fold]	1.65	1.52	1.32	1.42
Pearson coefficient of correlation [r]	0.95	0.96	0.96	0.96
p-value	0.00	0.00	0.00	0.00

Table S2. BestKeeper analysis for low-nutrient (n=11).

Target	gyrB	inf2	pfk	maf
geo Mean [CT]	18.67	16.57	21.35	20.20
ar Mean [CT]	18.70	16.61	21.38	20.20
min [CT]	17.14	15.19	19.55	19.63
max [CT]	20.56	18.35	22.87	20.92
std dev [± CT]	1.04	1.11	1.02	0.27
CV [% CT]	5.58	6.68	4.79	1.34
min [x-fold]	-2.88	-2.61	-3.47	-1.48
max [x-fold]	3.70	3.42	2.88	1.66
std dev [± x-fold]	2.06	2.16	2.03	1.21
Pearson coefficient of correlation [r]	0.97	0.98	0.97	0.66
p-value	0.00	0.00	0.00	0.03

Table S3. Summary of domain comparisons and gene content among CUKW and KCC01 in putative diguanylate cyclase genes.

CUKW GB locus ID	GGDEF	EAL	Other domains	KCC01 GB locus ID	GGDEF	EAL	Other domains
BFV93_0069	Y	Y		BFV94_0069	Y	Y	
BFV93_0081	Y	Y	GAF	BFV94_0081	Y	Y	GAF
BFV93_0114	Y	N		BFV94_0114	Y	N	
BFV93_0133	Y	N	7 TM diverse intracellular signaling	BFV94_0133	Y	N	7 TM diverse intracellular signaling
BFV93_0151	Y	Y	PAS S-box protein, PAS fold, 7TM-DISM extracellular 2	BFV94_0152	Y	Y	PAS S-box protein, PAS fold, 7TM-DISM extracellular 2
BFV93_0158	Y	N	response regulator receiver	BFV94_0159	Y	N	response regulator receiver
BFV93_0161	Y	N	MASE1	BFV94_0162	Y	N	MASE1
FV93_0305	Y	N		BFV94_0306	Y	N	
BFV93_0379	Y	Y	PAS S-box protein, PAS, PAS fold	BFV94_0380	Y	Y	PAS S-box protein, PAS, PAS fold
BFV93_0458	Y	N	7TM intracellular signaling, 7TMR-DISM extracellular 2	BFV94_0459	Y	N	7TM intracellular signaling, 7TMR-DISM extracellular 2
BFV93_0583	Y	N	PAS fold	BFV94_0585	y	N	PAS fold
BFV93_0640	Y	N		BFV94_0642	Y	N	
BFV93_0952	Y	N		BFV94_0952	Y	N	
BFV93_0985	Y	N		BFV94_0985	Y	N	
BFV93_1181	Y	N	Two-component regulator propeller, Y_Y_Y	BFV94_1181	Y	N	Two-component regulator propeller, Y_Y_Y
BFV93_1256	Y	N		BFV94_1257	Y	N	
BFV93_1270	Y	Y	PAS S-box protein, PAS, PAS fold, Two-component regulator propeller, Y_Y_Y	BFV94_1271	Y	Y	PAS S-box protein, PAS, PAS fold
BFV93_1299	Y	N		BFV94_1301	Y	N	
BFV93_1306	Y	Y	HAMP	BFV94_1308	Y	Y	HAMP
BFV93_1340	Y	N	PAS S-box protein	BFV94_1342	Y	N	PAS S-box protein
BFV93_1352	Y	N		BFV94_1354	Y	N	
BFV93_1526	Y	Y		BFV94_1531	Y	Y	
BFV93_1544	Y	Y	PAS S-box protein	BFV94_1548	Y	Y	PAS S-box protein
BFV93_1545	Y	Y		BFV94_1549	Y	Y	
BFV93_1557	Y	N	PAS S-box protein, PAS fold, PAS	BFV94_1561	Y	N	PAS S-box protein, PAS fold, PAS
BFV93_1571	Y	Y	Response regulator receiver, PAS S-box protein, PAS fold, PAS	BFV94_1575	Y	Y	Response regulator receiver, PAS S-box protein, PAS fold, PAS
BFV93_1572	Y	N	Response regulator receiver	BFV94_1576	Y	N	Response regulator receiver
BFV93_1606	Y	Y		BFV94_1610	Y	Y	
BFV93_1663	Y	N	extracellular solute-binding family 3 protein	BFV94_1667	Y	N	extracellular solute-binding family 3 protein
BFV93_1672	Y	N		BFV94_1676	Y	N	
BFV93_1731	Y	N	Two-component regulator propeller, Y_Y_Y	BFV94_1734	Y	N	Two-component regulator propeller, Y_Y_Y
BFV93_1770	Y	N	PAS S-box protein, PAS domain, PAS fold	BFV94_1775	Y	N	PAS S-box protein, PAS, PAS fold
BFV93_1889	Y	Y	HAMP	BFV94_1897	Y	Y	HAMP

BFV93_2053	Y	N		BFV94_2061	Y	N	
BFV93_2221	Y	Y	GAF	BFV94_2226	Y	Y	GAF
BFV93_2222	Y	N		BFV94_2227	Y	N	
BFV93_2401	Y	Y	Two-component regulator propeller, PAS S-box protein, PAS, PAS fold	BFV94_2406	Y	Y	
BFV93_2492	Y	Y		BFV94_2499	Y	Y	
BFV93_2889	Y	Y		BFV94_2901	Y	Y	
BFV93_2981	Y	N		BFV94_2993	Y	N	
BFV93_3092	Y	N		BFV94_3103	Y	N	
BFV93_3197	Y	N	response regulator receiver	BFV94_3207	Y	N	response regulator receiver
BFV93_3261	Y	N	PAS S-box protein, PAS, PAS fold	BFV94_3271	Y	N	PAS S-box protein, PAS, PAS fold
BFV93_3389	Y	N	7TM intracellular signaling, 7TMR-DISM extracellular 2	BFV94_3398	Y	N	7TM intracellular signaling, 7TMR-DISM extracellular 2
BFV93_3474	Y	Y	response regulator receiver	BFV94_3483	Y	Y	response regulator receiver
BFV93_3490	Y	Y		BFV94_3499	Y	Y	
BFV93_3520	Y	Y	PAS domain S-box protein, PAS	BFV94_3529	Y	Y	PAS S-box protein, PAS
BFV93_3580	Y	N	response regulator receiver	BFV94_3589	Y	N	response regulator receiver
BFV93_3921	Y	N		BFV94_3923	Y	N	
BFV93_3984	Y	N		BFV94_3987	Y	N	
BFV93_3992	Y	N		BFV94_3995	Y	N	
BFV93_4148	Y	N	PAS S-box protein, PAS, PAS fold, GAF	BFV94_4150	Y	N	PAS S-box protein, PAS, PAS fold, GAF
BFV93_4905	Y	N		BFV94_4642	Y	N	
BFV93_4914	Y	Y	PAS S-box protein, PAS, PAS fold	BFV94_4790	Y	Y	PAS S-box protein, PAS, PAS fold
BFV93_4965	Y	N		BFV94_4937	Y	N	
BFV93_1545	Y	Y		BFV94_1549	Y	Y	
BFV93_0411	Y	Y		BFV94_0412	Y	Y	
BFV93_3262	Y	N		BFV94_3272	Y	N	
BFV93_1451	Y	Y	PAS S-box protein, PAS, PAS fold	BFV94_1455	Y	Y	PAS S-box protein, PAS, PAS fold