

Supplementary Table S2: Statistical analysis from the RT-PCR results in *Orbicella faveolata*

Formulas:

(Hellemans et al. 2008)

Abbreviations:

EN: Inner-shelf Enrique

SC: Mid-shelf San Cristobal

$$Ratio = \frac{(E_{t\ target})^{\Delta Ct_{t\ target}}}{(E_{reference})^{\Delta Ct_{reference}}} \text{ Equation 1}$$

Whereas $\Delta Ct_{t\ target} = Ct_{control} - Ct_{treatment}$ and $\Delta Ct_{reference} = Ct_{control} - Ct_{treatment}$

$$Ratio = 2^{-\Delta\Delta Ct} \text{ Equation 2}$$

Whereas $\Delta\Delta Ct = \Delta Ct_{reference} - \Delta Ct_{t\ target}$

Reference gene with Ct values for *Orbicella faveolata* colonies in Enrique and San Cristobal reefs

	EN	A1	A2
CS	Actin	23.23	21.40
	Actin	22.96	22.30
	Actin	23.24	25.10
WS	Actin	16.20	17.19
	Actin	14.20	15.14
	Actin	13.60	13.12

Inner-shelf reef Enrique

Season	Sample	Gene	CT (B1)	B1-A1	Average Δ CT	$\Delta\Delta$ CT	$2^{-(\Delta\Delta$ CT)	$\log_{10}2^{-(\Delta\Delta$ CT)	Mean $\log_{10}2^{-(\Delta\Delta$ CT)	Mean	ST D	CV%
CS	Control	COI	6.22	-17.01	-16.9	-0.13	1.1	0.0	0.0	6.3	0.9	13.6
			5.24	-17.72		-0.84	1.8	0.3				
			7.33	-15.91		0.97	0.5	-0.3				
WS	Treated		33.01	16.81	-10.9	33.69	0.0	-10.1	-10.9	34.1	0.9	2.6
			35.15	20.95		37.83	0.0	-11.4				
			34.14	20.54		37.42	0.0	-11.3				
CS	Control	Green fluorescent	6.30	-16.93	-16.8	-0.15	1.1	0.0	0.0	6.4	0.2	2.7
			6.20	-16.76		0.02	1.0	0.0				
			6.60	-16.64		0.14	0.9	0.0				
WS	Treated		18.33	2.13	-6.1	18.91	0.0	-5.7	-6.1	18.2	0.7	4.0
			17.25	3.05		19.83	0.0	-6.0				
			19.01	5.41		22.19	0.0	-6.7				
CS	Control	Beta tubulin	33.01	9.78	11.0	-1.18	2.3	0.4	0.0	34.1	0.9	2.6
			35.15	12.19		1.23	0.4	-0.4				
			34.14	10.90		-0.06	1.0	0.0				
WS	Treated		10.12	-6.08	4.4	-17.04	134445.9	5.1	4.4	10.9	0.6	5.1
			11.00	-3.20		-14.16	18263.4	4.3				
			11.45	-2.15		-13.11	8820.6	3.9				
CS	Control	Cysteine rich protein	5.53	-17.70	-11.7	-6.04	65.6	1.8	0.0	5.8	0.4	7.0
			6.35	-16.61		-4.95	30.8	1.5				
			5.45	-0.68		10.98	0.0	-3.3				
WS	Treated		23.43	7.23	-5.9	18.89	0.0	-5.7	-5.9	22.5	0.8	3.7
			21.42	7.22		18.88	0.0	-5.7				
			22.56	8.96		20.62	0.0	-6.2				
CS	Control	α carbonic anhydrase	31.21	7.98	9.2	-1.18	2.3	0.4	0.0	32.3	0.8	2.6
			33.24	10.28		1.12	0.5	-0.3				
			32.45	9.21		0.05	1.0	0.0				
WS	Treated		7.59	-8.61	5.2	-17.77	222997.3	5.3	5.2	6.6	0.9	14.1
			5.36	-8.84		-18.00	261539.0	5.4				
			6.89	-6.71		-15.87	59750.6	4.8				

Mid-shelf reef San Cristobal

Season	SAMPLE	GENES	CT (B2)	B2-A2	Average ΔCT	ΔΔCT	2 ^{^-} (ΔΔCT)	log ₁₀ 2 ^{^-} (ΔΔCT)	log ₁₀ 2 ^{^-} (ΔΔCT)	Mean	STD	CV%
CS	Control	COI	21.08	-0.32	-1.87	1.55	0.3	-0.5	0.0	21.1	0.58	2.77
			20.34	-1.96		-0.09	1.1	0.0				
			21.77	-3.33		-1.46	2.8	0.4				
WS	Treated		23.54	6.35	12.48	8.22	0.9	0.0	24.9	24.9	1.11	4.44
			26.25	11.11		12.98	1.1	0.0				
			25.00	11.88		13.75	1.1	0.1				
CS	Control	Green fluorescent Protein	23.89	-15.06	-16.45	1.39	0.4	-0.4	0.0	23.6	0.48	2.05
			23.90	-15.52		0.93	0.5	-0.3				
			22.87	-18.77		-2.32	5.0	0.7				
WS	Treated		6.34	-10.85	-2.3	5.60	0.0	-1.7	-2.3	6.5	0.21	3.24
			6.78	-8.36		8.09	0.0	-2.4				
			6.33	-6.79		9.66	0.0	-2.9				
CS	Control	Beta tubulin	35.17	13.77	12.48	1.29	0.4	-0.4	0.0	35.4	0.51	1.43
			36.12	13.82		1.34	0.4	-0.4				
			34.95	9.85		-2.63	6.2	0.8				
WS	Treated		23.12	5.93	23.4	-6.55	93.7	2.0	23.4	23.4	0.23	0.98
			23.67	8.53		-3.95	15.5	1.2				
			23.29	10.17		-2.31	5.0	0.7				
CS	Control	Cysteine rich protein	3.45	-17.95	-19.59	34.46	0.0	-10.4	3.3	3.3	0.57	17.15
			2.59	-19.71		35.59	0.0	-10.7				
			3.98	-21.12		40.36	0.0	-12.2				
WS	Treated		32.06	14.87	32.4	11.42	0.0	-3.4	32.4	32.4	1.14	3.53
			31.14	16.00		13.70	0.0	-4.1				
			33.89	20.77		6.02	0.0	-1.8				
CS	Control	α car. anhydrase	23.64	-8.17	-9.21	5.25	0.0	-1.6	24.3	24.3	0.56	2.30
			24.32	-5.89		10.48	0.0	-3.2				
			25.01	-13.57		7.62	0.0	-2.3				
WS	Treated		13.23	-3.96	13.7	9.21	0.0	-2.8	13.7	13.7	2.02	14.74
			16.41	1.27		9.21	0.0	-2.8				
			11.53	-1.59		9.21	0.0	-2.8				