Table S2. List of genes employed in the multiplexed RT-qPCR assay 2.

Protein name	Acronym	Accession number	Product length	Oligo sequences[a]	Function	References
Reference genes						
Glyceraldehyde 3 phosphate dehydrogenase	*Gapdh*	EZ026309	187	F: AGGTGGAGCCAAGAAAGTCA R: TTAGCTAGAGGAGCCAGGCA	Housekeeping gene of demonstrated stable expression level	[24,26]
Ribosomal protein S7	*Rps7*	EZ031290	197	F: CAGGCATGCTTACAACCAAA R: TCAACCTCCTTTGCTCCAGT		
Ribosomal protein L9	*Rpl9*	EZ026324	292	F: CGTGTAAACGTGTGGTTTGC R: TTTGACACCTGAATTCGCAC		
Unknown transcript	*Ctg1913*	EZ040581	280	F: GATTTAACCACCGGCAGTGT R: ATGGTAGGGAGGAGGCTGTT		
Microtubule affinity-regulating kinase 3.	*Mark3*	EZ011755	162	F: GAGCAGAAGACCGAAACAGC R: AGGCTGCTTAGAGGAGGGTC	Housekeeping gene of demonstrated stable expression level	[57]
Genes of interest						
GTPases hydrolase enzyme	*Septin-1*	EZ027858	137	F: TTAACCATTGGTGGCATGAA R: GTTCCGGTTCTTGTTTTGGA	Cell division and cytokinesis.	[50]
GTPases hydrolase enzyme	*Septin-7*	EZ044856	157	F: TTTGCGAAGTTTTAGAGCGG R: CCTTTCTTGACGCTCTTTCG		
Leucine-rich repeat-containing protein 59	*LRRC59*	EZ012188	182	F: CGGCATTACCTAAAGCTAGGG R: AGATTGCCAAACTCCTGTGG	Toll/TLR pathway with 3e-50 on 95% coverage to *Hydra magnipapillata* (XP_002165534.1).	[58]
Cyclic AMP-dependent transcription factor ATF-2	*cAMP/ATF2*	EZ023176	202	F: TGCTAGCAGTCCTCCCTCAT R: ACATGGTTTCCTGGACTTGG	Classic Toll/TLR pathway.	[19,44,52,59]
Cyclic AMP-dependent transcription factor ATF-4	*cAMP/ATF4*	EZ013045	177	F: CAAGTGACCCTCCTTCTCCA R: AGAGACACATTCCCCAGGTG		
Cyclic AMP-dependent transcription factor ATF-6	*cAMP/ATF6*	EZ023811	285	F: GACGAGTTGCTTTGGGAAAA R: TGCACTGGTGAAGTGTCTCC		
Tyrosine aminotransferase	*tyr-amTase*	GH999932	192	F: TCTTTCCATCGGTGATCCAT R: AATGTTCAGCTGCGATAGCC	Tyrosin aminotransferase with 7e-37 on 85% coverage to *N. vectensis* (XP_001632576.1)	[51,60]
Sodium and chloride-dependent γ-aminobutyric acid transporter 2	*GABA/GAT-2*	EZ004523	152	F: TGGCCTGGGTGATCTGTTAC R: CCTCGAATCAATAGTGCCGT	Neurotransmitter (facilitates communication between neurons).	[43-45]
Sodium and chloride-dependent γ-aminobutyric acid transporter 3	*GABA/GAT-3*	EZ026165	207	F: CCAGGGAGTTGAAGTGGAAA R: AAAGCCTTCGATGCCTACAA		
Vesicular γ-aminobutyric acid transporter	*GABA/unc-47*	EZ005918	212	F: TTACCAACGGTTGAGTTGAGC R: TTCGTATTGGTCCTTCAGGC		
Sodium and chloride-dependent γ-aminobutyric acid transporter ine	*GABA/ine*	EZ004722	217	F: CCAAAATGCGTGGGATACAG R: CCTTCCTTCGTTTTTGTGGA		
NADH-ubiquinone oxidoreductase	*NADH-ubiq*	DY585529	222	F: ACTTTGGAAGGCTTTCCCTC R: AACAGGCCAGACCAAATGTC	First enzyme of the mitochondrial electron transport chain, associated with proton translocation across the membrane	[51]
Galactose binding lectin domain, nematogalectin-related	*Lectin/nemgalR1*	EU863779	142	F: TGAAATCAGATGCACCAAGC R: TCGTGCCCGTTTATAACCTC	Innate immune system cell surface recognition receptors.	[15,16]
Galactose binding lectin domain, nematogalectin-related	*Lectin/nemgalB1*	EU863780	227	F: GCGATGCGATGCTTATTACA R: TCCAATCTTCGGCTTACTGG		
Galactose binding lectin domain, nematogalectin-related	*Lectin/nemgalB2*	EU863778	270	F: ACATGTCCCAAGATTCCAGC R: CCTCCTTCTTTCAGCACGTC		
Serine/Threonine Kinases family DC2	*Pha-C3*	EZ023480	232	F: GATATGCTTCCCTTCACCCA R: GGCTGACACAGAGGGTTCTC	cAMP-dependent protein kinase A with 4e-113 on 90% coverage to *Hydroides elegans* (AB232160).	[52]
Green fluorescent protein	*amilGFP*	AY646067	147	F: TAGTGATCATCAAGCCTGCG R: AGGCATGTCTGCAGGGTACT	Fluorescent proteins account for visible coral colour other except brown (photosynthetic pigments of algal symbionts).	[25,29,61]
Cyan fluorescent protein	*amilCFP*	AY646070	245	F: GAGGAGTTGCTACAGCCAGC R: CCACCTCCTTCGAGCATAAG		
Red fluorescent protein	*amilRFP*	AY646073	172	F: CCATCCTGCGAGAAAATCAT R: CGGGTCAGACTTTGCTTTGT		
Blue chromoprotein	*amilCP*	AY646075	239	F: ACGGAAGCATACCATTCACC R: GGTCCATTGGGAGGAAAGTT		
Colourless green fluorescent like protein	*Colourless GFP-like*	AY650288	265	F: CAGCTGGATACACATGGCAC R: CCCCTTTCAATATCCCCTGT		
Cysteine-rich protein	*Amgalaxin-like-1*	HM163216	167	F: GTGGCAGGATTCGCTACATT R: CCGAAACAGCACTTGTGAGA	Galaxin-related gene.	[20]
Small cysteine-rich protein	*SCRiP-like*	DY587111	250	F: AGCGACCATAAGTTCGCAAG R: CATCACTTGTGCTAAGGGCA	Coral development and biomineralization	[21]
Small cysteine-rich protein	*SCRiP2*	BK006535	255	F: TTGATTTTACTGCTGGGCCT R: GGATAGCAGCAGCAGTGGTT		
Small cysteine-rich protein	*SCRiP3*	BK006536	260	F: GTTCGCAAGGGTTCAATCTC R: ATTCCTTTGGGCATCACTTG		
Some actin	*Actin*	DY579126	298	F: ATGAAGCTCAAAGCAAGCGT R: ACAGGGACAATACAGCCTGG	Structural filament protein.	[38,62]
Type I heterodimeric integral membrane glycoprotein	*Integrin-alpha1*	EU239371	303	F: TCAAGTTTTCACCCGGTAGG R: AGGACCATTATTACGCACCG	Cell-cell and cell-extracellular matrix adhesion.	[64]

[a] Forward (AGGTGACACTATAGAATA) and reverse (GTACGACTCACTATAGGGA) fluorescent universal tags, omitted from the oligo sequences in the table, were added at the 5' end of all primers.