

Additional File 1 Changes in mRNA levels in *Pomacentrus moluccensis* exposed to three-hour stress treatments compared to *P. moluccensis* kept at ambient conditions (28°C, 100% air saturation). GenBank accession numbers refer to the *Danio rerio* clones represented on the microarray. Statistical significance was determined using Bayesian analysis of the expression response across biological replicates (p-values are FDR-corrected). Negative values of fold change indicate down-regulation of gene in stressed *P. moluccensis*, while positive values indicate up-regulation. Only genes with FDR-corrected p-values <0.1 and genes with greater two-fold expression changes are reported here.

Rank	GenBank Accession <i>D. rerio</i> clone	UniGene ID	Gene Symbol	Putative Identification	Function	Fold Change	p
Cold shock (22°C)							
1	BI533884	Dr.17570	mknk2	MAP kinase-interacting kinase 2	Response to stress; Protein kinase cascade	+2.20	0.1667
16	AI601458	Dr.17520	ube2h	Ubiquitin-conjugating enzyme E2H	Protein catabolism; Response to heat	+2.13	0.9994
Moderate heat shock (31°C)							
1	AW134054	Dr.36134	plec1	Plectin 1	Structural constituent of cytoskeleton	+1.75	0.0015
9	AI601458	Dr.17520	ube2h	ubiquitin-conjugating enzyme E2H	Protein catabolism; Response to heat	+2.44	0.2658
72	BI710730	Dr.31497	ncl	Nucleolin	RNA binding	+2.78	0.5414
170	AW116649	Dr.1099	prkcsh	Protein kinase C substrate 80K-H	Kinase activity; Calcium ion binding	-2.05	0.5604
172	AI476925	Dr.1218	EXOSC2	Exosome component 2	Exonuclease activity; rRNA processing	+2.15	0.5604
186	AB026980	Dr.8092	odz4	odd Oz/ten-m homolog 4	MAPKKK cascade; immune response	+2.30	0.5604
315	BI673605	Dr.6875	TRIAD3	TRIAD3 protein	Protein binding; Ubiquitin cycle	+2.57	0.6326
353	BI865754	Dr.59783	hmg4	High mobility group protein 4	DNA-dependent regulation of transcription	+2.28	0.6608
464	AW826769	Dr.32001	ptk9l	Protein tyrosine kinase 9-like	Cytoskeleton; Actin binding	+2.05	0.7174
1039	AB057355	Dr.12576	ednra	Endothelin receptor type A	Signal Transduction	+2.14	0.7895
Severe heat shock (34°C)							
1	AF387900	Dr.6509	pdip5	Protein disulfide isomerase-related protein P5	Protein folding	+4.89	0.0000
2	AI959074	Dr.18762	rhoA	Ras-like protein RhoA	Regulation of cell cycle	-1.60	0.0006
3	BG729495	Dr.31651	ZCCHC11	Zinc finger CCHC domain containing 11 isoform b	DNA replication, recombination, and repair	+1.99	0.0039
4	AW175080	Dr.8390	SC4MOL	Sterol-C4-methyl oxidase-like	Catalytic activity; Sterol biosynthesis	-1.66	0.0624
5	AW279775	Dr.3130	rgs4	Regulator of G-protein signalling 4	Signal transducer activity	-1.30	0.0624
6	BI876768	Dr.43918	znf395	Zinc finger protein 395	DNA-dependent regulation of transcription	-1.52	0.0624
197	AF246169	Dr.30471	tcrα	T-cell receptor alpha variable region	T-cell receptor complex	-2.25	0.9998
845	BE557072	Dr.10066	birc6	Baculoviral IAP repeat-containing 6	Ubiquitin conjugating enzyme activity	-2.49	0.9998
Hypoxia (23-36% air saturation)							
1	AI558655	Dr.36283	acin1a	Apoptotic chromatin condensation inducer 1a	DNA binding; Apoptosis	+2.47	0.0008
2	AI522803	Dr.34133	Ela2	Elastase 2	Proteolysis and peptidolysis	+2.90	0.0011
3	AI558632	Dr.33926	ElaA	Elastase A	Proteolysis and peptidolysis	+2.99	0.0085
5	BI476356	Dr.16450	CHST2	Carbohydrate sulfotransferase 2	Inflammatory response; Sulfur metabolism	+1.32	0.0085
7	BM183382	Dr.16654	AVD	Avidin	Biotin binding	+2.25	0.0176
8	AI496860	Dr.31546	Cpa2	Carboxypeptidase A2	Proteolysis and peptidolysis	+2.84	0.0258
9	AF025305	Dr.1109	bactin2	Actin, cytoplasmic 1 (Beta-actin)	Structural constituent of cytoskeleton	+1.60	0.0647
10	BM103972	Dr.2437	amy2a	Amylase-3 protein	Carbohydrate metabolism; Hydrolase activity	+2.76	0.0651
16	AW777717	Dr.2317	NKX2-8	NK2 transcription factor related, locus 8	Transcription factor activity	-2.19	0.2928
112	AF052252	Dr.21004	fdk9	Fork head domain protein FKD9	Transcription factor activity	-2.38	0.6438
332	AB026980	Dr.8092	odz4	Odd Oz/ten-m homolog 4	MAPKKK cascade; immune response	-2.06	0.9476
578	BI710730	Dr.31497	ncl	Nucleolin	RNA binding	-2.01	0.9998