

Table S5. Gene expression profiles of *NyHTR2* and *NyHTR2L* in three generations of *Neopyropia yezoensis* under heat stress normalized using *eIF4A* as the reference gene

Gene	Generation	Temperature	Duration (h)							
			0	0.5	1	2	4	6	8	12
<i>NyHTR2</i>	G	5°C	1 ± 0 ^b	0.03 ± 0.01 ^a	0.07 ± 0.02 ^a	0.28 ± 0.05 ^a	0.6 ± 0.2 ^{ab}	0.67 ± 0.06 ^{ab}	0.86 ± 0.09 ^{ab}	2.67 ± 0.45 ^d
		15°C	1 ± 0 ^b	1.47 ± 0.21 ^{bc}	0.94 ± 0.25 ^b	0.81 ± 0.28 ^b	1.21 ± 0.16 ^{bc}	1.06 ± 0.38 ^{bc}	1.3 ± 0.28 ^{bc}	1.43 ± 0.3 ^c
		25°C	1 ± 0 ^b	2.27 ± 0.62 ^d	3.63 ± 0.94 ^{dc}	12.46 ± 1.97 ^g	3.71 ± 1.19 ^{dc}	4.24 ± 1.02 ^c	12.19 ± 2.55 ^g	6.96 ± 1.44 ^f
<i>NyHTR2L</i>	G	5°C	1 ± 0 ^{ab}	0.07 ± 0.02 ^a	0.51 ± 0.04 ^a	2.99 ± 0.15 ^{ab}	2.77 ± 0.43 ^{ab}	0.9 ± 0.17 ^{ab}	0.01 ± 0 ^a	5.11 ± 0.49 ^b
		15°C	1 ± 0 ^{ab}	2.33 ± 0.95 ^{ab}	2.35 ± 1 ^{ab}	4.93 ± 0.35 ^b	5.43 ± 0.4 ^b	3.22 ± 0.84 ^b	1.48 ± 0.08 ^{ab}	4.14 ± 0.94 ^b
		25°C	1 ± 0 ^{ab}	8.05 ± 1.21 ^c	35.21 ± 1.52 ^c	64.43 ± 4.05 ^{fg}	16.87 ± 1.29 ^d	27.82 ± 5.89 ^c	73.19 ± 6.37 ^g	54.74 ± 4.37 ^f
	S	5°C	1 ± 0 ^b	1 ± 0.1 ^b	0.97 ± 0.1 ^b	0.88 ± 0.08 ^b	1.37 ± 0.02 ^b	0.51 ± 0.09 ^a	0.42 ± 0.11 ^a	0.98 ± 0.05 ^b
		15°C	1 ± 0 ^b	1.43 ± 0.08 ^{bc}	1.36 ± 0.32 ^{bc}	1.59 ± 0.44 ^{bc}	1.42 ± 0.15 ^{bc}	1.75 ± 0.11 ^{bc}	1.92 ± 0.2b ^c	2.05 ± 0.3 ^c
		25°C	1 ± 0 ^b	1.53 ± 0.16 ^{bc}	4.11 ± 0.57 ^d	7.04 ± 0.82 ^c	1.54 ± 0.28 ^{bc}	4.2 ± 0.53 ^d	11.54 ± 0.97 ^f	7.74 ± 0.23 ^e
	CS	5°C	1 ± 0 ^b	0.73 ± 0.08 ^{ab}	1.29 ± 0.16 ^{bc}	0.5 ± 0.02 ^{ab}	0.35 ± 0.03 ^a	0.59 ± 0.06 ^{ab}	0.91 ± 0.1 ^b	0.93 ± 0.08 ^b
		15°C	1 ± 0 ^b	0.48 ± 0.08 ^a	0.35 ± 0.04 ^a	0.48 ± 0.05 ^a	0.71 ± 0.01 ^{ab}	0.64 ± 0.06 ^{ab}	0.62 ± 0.02 ^{ab}	1.04 ± 0.03 ^{bc}
		25°C	1 ± 0 ^b	0.64 ± 0.05 ^{ab}	1.41 ± 0.03 ^c	2.6 ± 0.46 ^d	1.66 ± 0.05 ^{cd}	1.29 ± 0.13 ^{bc}	4.93 ± 0.19 ^c	3.14 ± 0.24 ^d

Mean values ± SD were calculated from triplicate experiments, and letters denote statistically significant differences ($p < 0.05$) determined by two-way ANOVA. G, gametophyte; S, sporophyte; CS, conchosporophyte.