

**Table S1.** Hematology and plasma lactate and osmolality in control and TD brook char following acute exposure to graded hypoxia and reoxygenation. MCHC; mean corpuscular hemoglobin concentration. No significant differences between control and TD treatment groups were noted.

Treatment	Hematocrit (%)	Hemoglobin (g L <sup>-1</sup> )	MCHC (g L <sup>-1</sup> )	Lactate (mmol L <sup>-1</sup> )	Osmolality (mOsmol kg <sup>-1</sup> )
Control	41.4 ± 2.2	70.2 ± 4.3	171.0 ± 10.6	4.20 ± 1.78	295.9 ± 7.3
TD	37.3 ± 2.1	60.0 ± 4.1	169.0 ± 8.6	2.35 ± 0.82	294.8 ± 4.0

**Table S2.** Morphometric measurements (in µm) and the frequency of various cell types (number of cells 1000 µm<sup>-2</sup>) found on gill filaments from control (n = 8) and TD brook char (n = 4).

	Filament width	Lamellae length	Lamellae thickness	Apical pits	Mucosal cells	Ionocytes
Control	170.5 ± 7.4	146.5 ± 10.8	18.0 ± 1.1	4.5 ± 2.5	3.3 ± 0.8	1.8 ± 0.8
TD	184.2 ± 15.6	163.8 ± 15.4	21.6 ± 3.0	4.3 ± 2.0	4.5 ± 3.2	1.5 ± 0.3