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Supplementary Table S3: Analyses of variance on –ΔCT data from ambient, medium and high CO_2 adapted *Emiliania huxleyi* populations. Results of 2x2 factorial analyses of variances (ANOVA) and subsequent planned contrasts on mean –ΔCT values are given. The main effect "assay condition" in the 2-factorial ANOVA identified significant physiological responses. Planned contrasts for assessing adaptation were performed only when in the initial 2-factorial ANOVA either the main effect "selection condition" or the interaction "selection x assay condition" was statistical significant. All *F*-ratios have 1 (nominator) and 16 (denominator) degrees of freedom.

Gene of interest	Data sets used in ANOVAs	Selection condition	Assay condition	Selection x assay condition	Planned contrasts
AEL1	400-400/1100-400 vs.	*F*=10.713	*F*=25.427	*F*=1.480	*F*=10.078
	400-1100/1100-1100	*P*=0.0048	*P*=0.0001	*P*=0.2414	*P*=0.0059
	400-400/2200-400 vs.	*F*=0.3755	*F*=28.1428	*F*=0.8616	*na*
	400-2200/2200-2200	*P*=0.5486	*P*<0.0001	*P*=0.3671	
alphaCA	400-400/1100-400 vs.	*F*=0.3148	*F*=1.9074	*F*= 0.0993	*na*
	400-1100/1100-1100	*P*=0.5825	*P*=0.1862	*P*=0.7567	
	400-400/2200-400 vs.	*F*=0.6997	*F*=22.5955	*F*=1.2277	*na*
	400-2200/2200-2200	*P*=0.4152	*P*=0.002	*P*=0.2842	
ATPVc/c'	400-400/1100-400 vs.	*F*=7.5456	*F*=9.3006	*F*=0.5409	*F*= 6.063
	400-1100/1100-1100	*P*=0.0143	*P*=0.0076	*P*=0.4727	*P*=0.0255
	400-400/2200-400 vs.	*F*=1.0998	*F*=35.2723	*F*=0.9355	*na*
	400-2200/2200-2200	*P*=0.3099	*P*<0.0001	*P*=0.3478	
CAX3	400-400/1100-400 vs.	*F*=2.4809	*F*=10.4546	*F*=1.3923	*na*
	400-1100/1100-1100	*P*=0.1348	*P*=0.0052	*P*=0.2553	
	400-400/2200-400 vs.	*F*=0.0020	*F*=27.1082	*F*=0.5907	*na*
	400-2200/2200-2200	*P*=0.9646	*P*<0.0001	*P*=0.4533	
deltaCA	400-400/1100-400 vs.	*F*=0.2249	*F*=15.4993	*F*=2.3241	*na*
	400-1100/1100-1100	*P*=0.6418	*P*=0.0012	*P*=0.1469	
	400-400/2200-400 vs.	*F*=0.3248	*F*=64.2940	*F*=1.6305	*na*
	400-2200/2200-2200	*P*=0.5766	*P*<0.0001	*P*=0.2198	
GPA	400-400/1100-400 vs.	*F*=0.0016	*F*=1.3600	*F*=0.3940	*na*
	400-1100/1100-1100	*P*=0.9682	*P*=0.2606	*P*=0.5390	
	400-400/2200-400 vs.	*F*=0.0168	*F*=0.4948	*F*=0.0001	*na*
	400-2200/2200-2200	*P*=0.8986	*P*=0.4919	*P*=0.9908	
LCIX	400-400/1100-400 vs.	*F*=0.0449	*F*=0.4996	*F*=0.0825	*na*
	400-1100/1100-1100	*P*=0.8349	*P*=0.4899	*P*=0.7776	
	400-400/2200-400 vs.	*F*=0.1202	*F*=2.5409	*F*=1.1782	*na*
	400-2200/2200-2200	*P*=0.7334	*P*=0.1305	*P*=0.2938	
NhaA2	400-400/1100-400 vs.	*F*=0.6470	*F*=12.1306	*F*=2.4499	*na*
	400-1100/1100-1100	*P*=0.4330	*P*=0.0031	*P*=0.1371	
	400-400/2200-400 vs.	*F*=0.0074	*F*=35.9695	*F*=3.1210	*na*
	400-2200/2200-2200	*P*=0.9323	*P*<0.0001	*P*=0.0964	
PATP	400-400/1100-400 vs.	*F*=0.0988	*F*=0.9505	*F*=1.7188	*na*
	400-1100/1100-1100	*P*=0.7573	*P*=0.3441	*P*=0.2084	
	400-400/2200-400 vs.	*F*=0.0757	*F*=14.0222	*F*=10.0578	*F*=5.940
	400-2200/2200-2200	*P*=0.7867	*P*=0.0018	*P*=0.0059	*P*=0.0269
RB	400-400/1100-400 vs.	*F*=0.6023	*F*=0.1986	*F*=0.0800	*na*
	400-1100/1100-1100	*P*=0.4490	*P*=0.6619	*P*=0.7809	
	400-400/2200-400 vs.	*F*=1.7555	*F*=8.1453	*F*=0.0561	*na*
	400-2200/2200-2200	*P*=0.2038	*P*=0.0115	*P*=0.8158	