

Plant Group	Treatment	Fresh weight	Endogenous ABA	A	E	gs	Ci/Ca	Fv'/Fm'	Φ PSII	Φ CO ₂	ETR	qP	qN
		g plant ⁻¹	nM g FW ⁻¹	μmol CO ₂ m ⁻² s ⁻¹	mmol H ₂ O m ⁻² s ⁻¹	mol H ₂ O m ⁻² s ⁻¹						μmol m ⁻² s ⁻¹	
WT	Control	22.14 ± 0.71 e	225.8 ± 24.1 b	21.78 ± 0.45 ef	5.490 ± 0.214 bc	0.328 ± 0.019 ab	0.693 ± 0.012 a	0.592 ± 0.003 cd	0.455 ± 0.007 cd	0.026 ± 0.000 ef	193.4 ± 3.3	0.767 ± 0.009 cde	2.454 ± 0.021 cd
	Salinity	13.17 ± 1.30 d	611.7 ± 37.1 bc	11.03 ± 2.04 bcd	3.482 ± 0.325 ab	0.175 ± 0.021 a	0.716 ± 0.020 a	0.514 ± 0.012 ab	0.323 ± 0.024 ab	0.014 ± 0.002 bcd	137.5 ± 10.2	0.627 ± 0.034 abc	2.063 ± 0.052 ab
	Heat	10.94 ± 1.10 cd	616.5 ± 22.4 bc	7.391 ± 0.80 abc	4.698 ± 0.454 abc	0.141 ± 0.018 a	0.736 ± 0.006 a	0.511 ± 0.010 ab	0.373 ± 0.024 bc	0.009 ± 0.000 abc	159.0 ± 10.3	0.730 ± 0.038 bcde	2.049 ± 0.042 ab
	Salinity+Heat	12.04 ± 1.39 d	782.1 ± 2.1 cd	1.113 ± 0.312 a	2.558 ± 0.278 a	0.069 ± 0.007 a	0.876 ± 0.021 b	0.479 ± 0.008 a	0.245 ± 0.008 a	0.002 ± 0.000 a	104.6 ± 3.7	0.513 ± 0.023 a	1.920 ± 0.029 a
flc-	Control	7.280 ± 0.995 abc	27.16 ± 2.95 a	27.62 ± 1.11 f	11.55 ± 0.43 d	1.249 ± 0.069 c	0.880 ± 0.004 b	0.631 ± 0.008 d	0.513 ± 0.009 d	0.033 ± 0.001 f	218.0 ± 4.1	0.812 ± 0.004 de	2.715 ± 0.062 d
	Salinity	3.689 ± 0.615 a	37.77 ± 2.31 a	14.70 ± 3.25 cde	11.75 ± 0.16 d	1.042 ± 0.089 bc	0.915 ± 0.016 b	0.559 ± 0.031 bc	0.403 ± 0.033 bc	0.018 ± 0.003 cde	171.3 ± 14.2	0.719 ± 0.022 bcde	2.290 ± 0.154 bc
	Heat	6.562 ± 0.386 ab	34.60 ± 3.33 ab	19.47 ± 2.71 def	19.37 ± 1.16 e	1.632 ± 0.425 c	0.912 ± 0.017 b	0.603 ± 0.005 cd	0.455 ± 0.008 cd	0.024 ± 0.003 def	193.8 ± 3.8	0.755 ± 0.008 cde	2.521 ± 0.034 cd
	Salinity+Heat	3.423 ± 0.364 a	53.21 ± 0.42 a	17.00 ± 1.04 de	17.36 ± 0.28 e	1.215 ± 0.197 c	0.907 ± 0.013 b	0.616 ± 0.014 cd	0.424 ± 0.027 bcd	0.021 ± 0.001 de	180.2 ± 11.5	0.688 ± 0.039 bcd	2.614 ± 0.098 cd
flc+	Control	10.19 ± 0.22 bcd	481.8 ± 38.8 b	18.60 ± 2.38 de	6.804 ± 0.411 c	0.275 ± 0.033 a	0.678 ± 0.015 a	0.600 ± 0.014 cd	0.517 ± 0.017 d	0.023 ± 0.002 de	219.8 ± 7.6	0.860 ± 0.012 e	2.510 ± 0.090 cd
	Salinity	7.136 ± 0.422 abc	962.8 ± 67.6 de	12.00 ± 1.55 cd	3.754 ± 0.533 ab	0.187 ± 0.034 a	0.700 ± 0.015 a	0.514 ± 0.003 ab	0.327 ± 0.012 ab	0.015 ± 0.001 cd	139.3 ± 5.6	0.636 ± 0.021 abc	2.061 ± 0.014 ab
	Heat	10.58 ± 0.62 bcd	984.2 ± 77.0 de	2.594 ± 0.836 ab	5.257 ± 0.780 abc	0.160 ± 0.029 a	0.885 ± 0.016 b	0.482 ± 0.000 a	0.331 ± 0.026 ab	0.004 ± 0.000 ab	141.0 ± 11.2	0.687 ± 0.054 bcd	1.933 ± 0.000 a
	Salinity+Heat	4.526 ± 0.117 a	1013 ± 74 e	1.746 ± 0.513 a	2.768 ± 0.599 ab	0.101 ± 0.024 a	0.862 ± 0.056 b	0.451 ± 0.016 a	0.264 ± 0.016 a	0.003 ± 0.000 a	112.3 ± 6.8	0.589 ± 0.048 ab	1.825 ± 0.052 a

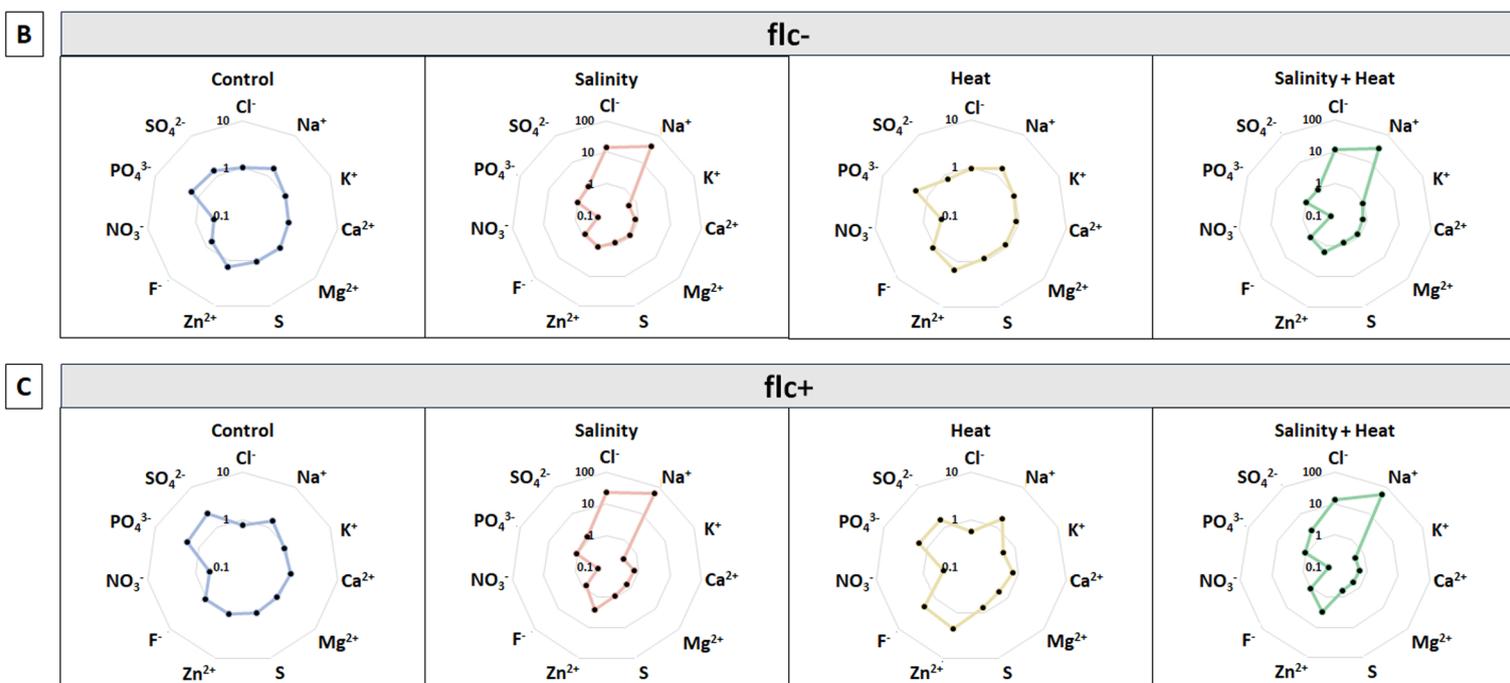


Figure 1. Phenomics and ionomics analysis in tomato wild-type (WT) and ABA-deficient flacca mutant without (*flc-*) and with (*flc+*) ABA exogenous application under control, salinity, heat, and combination of salinity and heat. (A) Data of physiological parameters in WT, *flc-* and *flc+* mutants under control, salinity, heat, and salinity+heat. (B, C) Radial graphs of cations and anions of *flc-* (B) and *flc+* (C) under control, salinity, heat, and combination of salinity and heat normalized against Wt plants grown under control conditions. Raw data for Figure B and C can be found in supplemental Table S1. A: photosynthesis; E: transpiration; gs: stomata conductance; Ci/Ca: intercellular CO₂/ambiente CO₂; Fv'/Fm': Variable to maximal fluorescence (light); Φ PSII: photosystem II quantum yield; Φ CO₂: quantum efficiency of CO₂ assimilation; ETR: electron transport rate; qP: photochemical quenching; qN: non-photochemical quenching.