

A	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 a	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

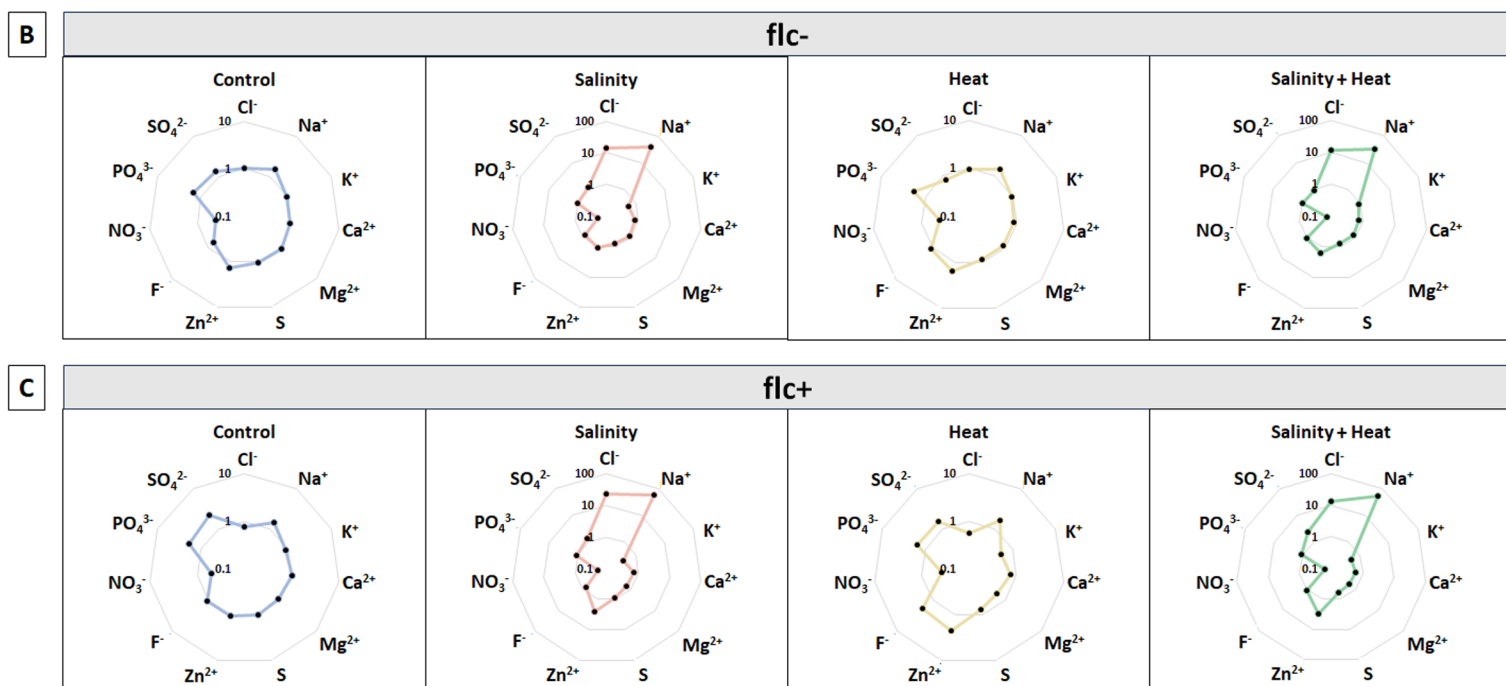


Figure 1. Phenomics and ionomics analysis in tomato wild-type (WT) and ABA-deficient flacca mutant without (flc-) and with (flc+) ABA exogenous application under control, salinity, heat, and combination of salinity and heat. (A) Data of physiological parameters in WT, flc- and flc+ mutants under control, 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.