

Title: Alternative splicing regulation appears to play a crucial role in grape berry development and is also potentially involved in adaptation responses to the environment

Journal: BMC Plant Biology

Authors: Pascale Maillot, Amandine Velt, Camille Rustenholz, Gisèle Butterlin, Didier Merdinoglu, Eric Duchêne

Corresponding author: Pascale Maillot, SVQV, INRAE - University of Strasbourg, 68000 Colmar, France, France, pascale.maillot@inrae.fr

Gene ID	Comparisons between consecutive stages ¹											
	S1 vs S2				S2 vs S3				S3 vs S4			
	Gw		Ri		Gw		Ri		Gw		Ri	
	Transcr Reg log ₂ FC (FDR) ²	Splicing Reg ³	Transcr Reg log ₂ FC (FDR) ²	Splicing Reg ³	Transcr Reg log ₂ FC (FDR) ²	Splicing Reg ³	Transcr Reg log ₂ FC (FDR) ²	Splicing Reg ³	Transcr Reg log ₂ FC (FDR) ²	Splicing Reg ³	Transcr Reg log ₂ FC (FDR) ²	Splicing Reg ³
Vitvi03g00047	–	–	–	–	–	–	–	–	1.1 (2.8 E-03)	yes	–	–
Vitvi03g01012	–	–	–	–	1.0 (2.3 E-23)	–	–	–	–	yes	–	–
Vitvi04g00040	–	–	–	–	1.9 (1.5 E-16)	–	1.3 (2.9 E-08)	–	–	yes	–	–
Vitvi04g00388	–	–	–	–	1.0 (1.1 E-02)	–	–	–	1.6 (1.3 E-05)	yes	1.4 (1.5 E-04)	yes
Vitvi04g01198	–	yes	–	–	–	yes	-1.1 (2.2 E-05)	–	-1.2 (1.6 E-06)	–	–	–
Vitvi05g00214	-1.7 (4.9 E-11)	–	-1.0 (1.6 E-04)	–	–	–	–	–	–	–	-1.5 (1.5 E-10)	yes
Vitvi05g00364	–	–	–	–	–	–	–	–	–	–	-1.1 (1.2 E-11)	Yes
Vitvi05g00462	–	–	–	–	–	–	–	–	–	–	2.0 (7.0 E-16)	Yes
Vitvi05g00530	–	–	–	–	–	–	–	–	-1.0 (1.5 E-06)	–	-1.1 (1.4 E-07)	Yes
Vitvi06g00213	–	–	–	–	–	–	–	–	–	–	1.4 (5.7 E-06)	Yes
Vitvi07g00544	–	–	–	–	–	–	–	–	1.1 (3.6 E-03)	yes	–	–
Vitvi07g01473	–	–	–	–	–	–	–	–	1.1 (3.2 E-03)	yes	1.4 (2.2 E-04)	–
Vitvi08g00972	–	–	–	–	2.3 (5.3 E-35)	–	1.3 (1.2 E-11)	–	–	yes	–	–
Vitvi11g01400	–	–	1.0 (1.1 E-06)	–	1.4 (8.2 E-13)	–	1.7 (9.5 E-19)	–	–	–	–	Yes
Vitvi13g01687	–	–	–	–	–	–	–	–	–	yes	1.4 (1.4 E-04)	–
Vitvi14g00256	–	–	–	–	–	–	–	–	–	–	1.2 (6.1 E-26)	Yes
Vitvi14g01906	–	–	–	–	–	–	–	–	1.3 (2.0 E-06)	–	–	Yes
Vitvi15g01191	–	–	–	–	–	–	–	–	-1.3 (2.5 E-30)	–	-1.2 (9.7 E-24)	Yes
Vitvi17g00561	–	–	–	–	1.0 (9.2 E-10)	–	–	–	–	yes	–	Yes
Vitvi17g00770	–	–	–	–	–	–	–	–	-1.3 (1.5 E-11)	–	–	Yes
Vitvi18g01553	–	–	–	–	–	–	–	–	1.3 (3.8 E-15)	–	–	Yes

Vitvi19g00041	—	—	1.6 (8.1 E-30)	—	—	—	1.0 (1.8 E-13)	—	—	—	—	Yes
Vitvi19g00604	—	—	—	—	—	—	—	—	1.6 (3.9 E-21)	—	—	yes
Vitvi19g01705	—	—	—	—	-1.4 (4.1 E-05)	—	-1.0 (4.0 E-03)	—	—	yes	—	—
Vitvi19g01964	—	—	1.2 (5.0 E-05)	—	1.7 (2.1 E-08)	—	1.6 (1.7 E-08)	yes	1.4 (1.7 E-06)	—	—	—

¹ S1: green berry at 6 weeks post-flowering, S2: hard berry at mid-véraison, S3: soft berry at mid-véraison, S4: mid-ripening

² Transc Reg: regulation at the transcriptional level, validated for a log₂ fold change (FC) ≥ 1.0, significant at FDR ≤ 0.05

³ Splicing Reg: regulation at the splicing level, as reported in Online Resource 1

Additional file 5. Genes regulated between consecutive stages of berry development at both transcriptional and splicing level. Gene IDs correspond to the

VCost.v3 genome annotation