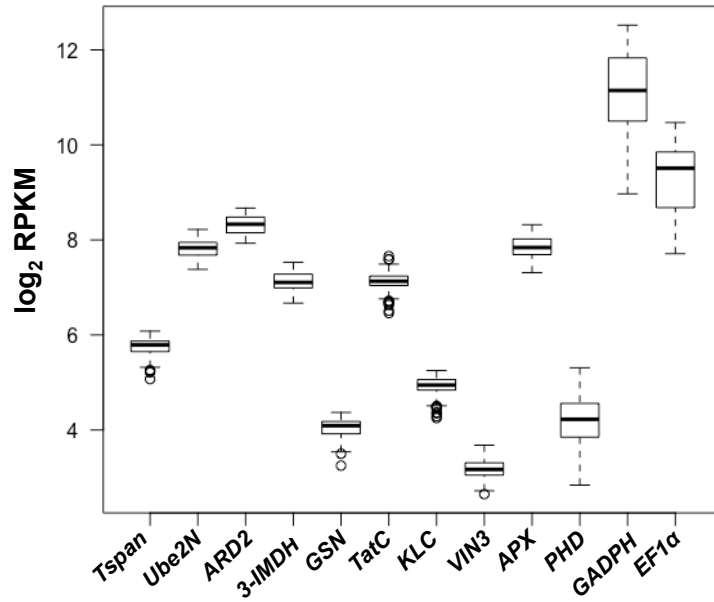


Manuscript title

Use of RNA-seq data to identify and validate RT-qPCR reference genes for studying the tomato-*Pseudomonas* pathosystem

List of authors:

1. Marina A. Pombo
2. Yi Zheng
3. Zhangjun Fei
4. Gregory B. Martin
5. Hernan G. Rosli



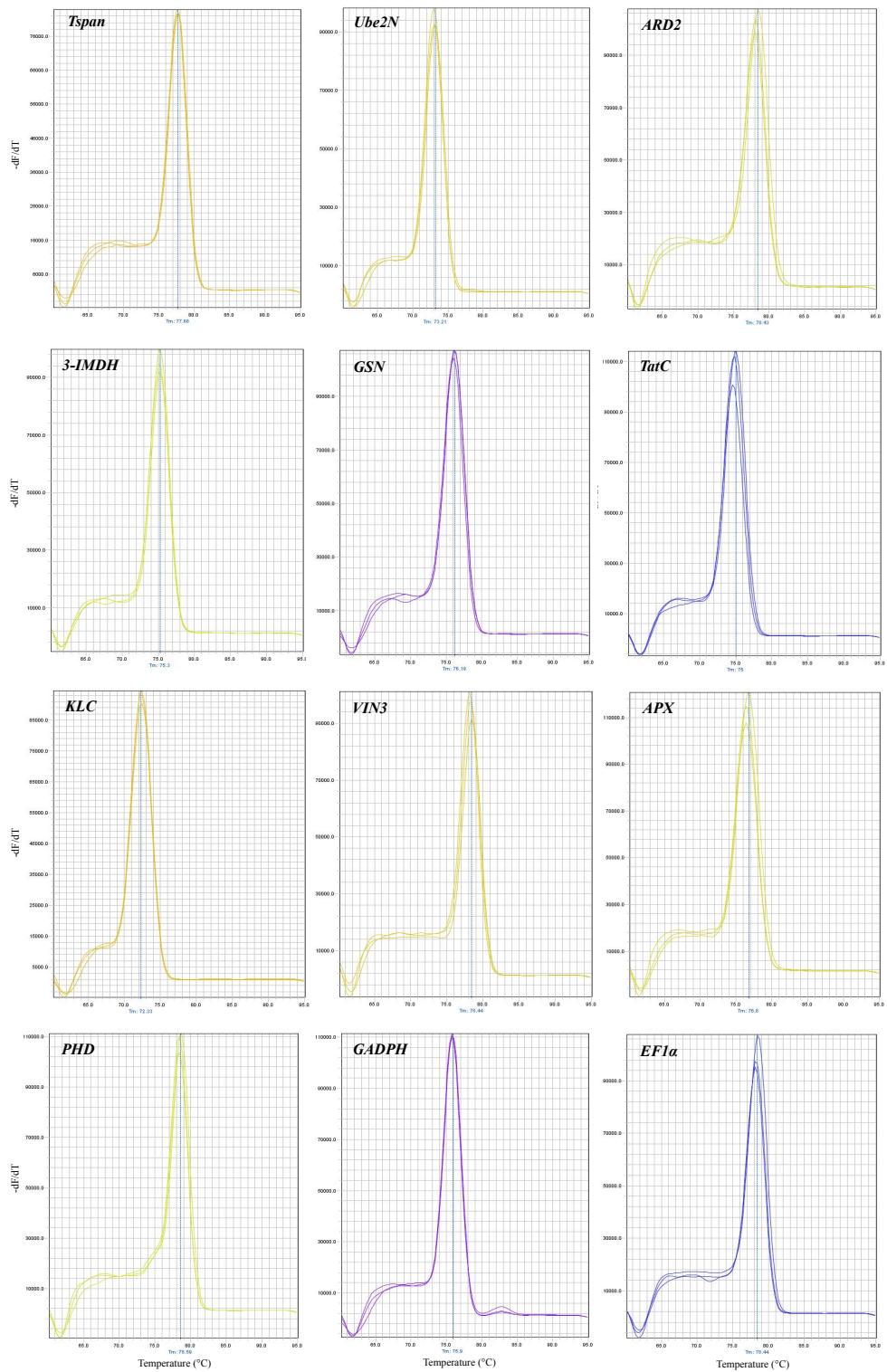
Supplementary Fig. S1: RNA-seq expression level (RPKM) of candidate and classical reference genes from tomato. Box and whisker plot graph showing log₂ RPKM values of each selected gene in all the samples analyzed (n=110). Black lines and boxes represent the medians and 25/75 percentiles, respectively. Whisker caps represent the minimum and maximum values. ○, indicate outliers.

Supplementary Table S3: Selected candidate gene primer characteristics

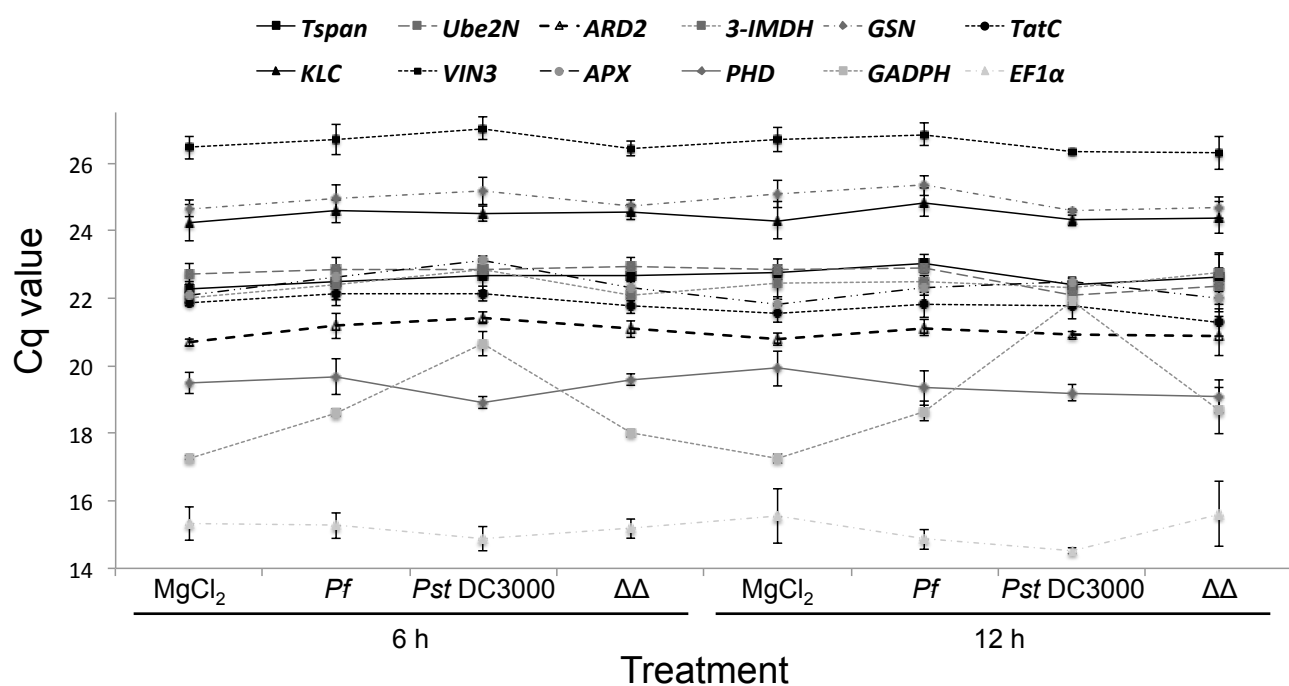
Gene	Transcript ID	Primer sequence	Amplicon length (bp)	T _m (°C)	Amplification efficiency (%)
<i>Tspan</i>	Solyc08g077220	TCTTATTGGCCCTCGTAGT	99	55.2	89
		GTGGCTGTCCGATTTGTT		53.9	
<i>Ube2N</i>	Solyc07g062570	TGGATAGCACCCCTCCAAA	144	53.9	117
		CCCACAGATCTGAATCACTTAC		60.3	
<i>ARD2</i>	Solyc01g104170	TGTTTCATCAGTGTGCTAGTG	99	56.4	99
		GCTGTCCTTCCTTCTGAATC		58.4	
<i>3-IMDH</i>	Solyc03g005730	CCTCAGCAGACTGAAAGAAA	106	56.4	95
		GGCTCACATCAGGCTTATC		57.3	
<i>GSN</i>	Solyc02g021420	GCCATGTAGTGCCTGTAAT	95	55.2	107
		CTCTGTCACTGCCACATTAG		58.4	
<i>TatC</i>	Solyc05g008530	CTAGGTCCAGGAGAGTTCTT	109	58.4	99.9
		CAGGAAGAACGAAGGCTATG		58.4	
<i>KLC</i>	Solyc00g082150	GCATTTGGCTTCAGAAAGTTG	114	56.4	106
		CAACCAATAAGCTTCACCAG		56.4	
<i>VIN3</i>	Solyc07g018270	ACTGGTTTGCCTGTGAAG	114	53.9	98.7
		CTCAGAGAGAAGGGCATCTA		58.4	
<i>APX</i>	Solyc01g111510	CTCATTGTGCGATCGGTTCTC	78	58.4	91.6
		CGACGAGCTTTCTCGATTT		55.2	
<i>PHD¹</i>	Solyc06g051420	GGGATGGGATGGAGCGTAGAGA	279	65.9	87.3
		CATCACTCTCCTCTTGCAAGCT		64.0	
<i>GADPH¹</i>	Solyc04g009030	CTGCTCTCTCAGTAGCCAACAC	156	64.0	83.3
		CTTCCTCCAATAGCAGAGGTTT		60.3	
<i>EF1α²</i>	Solyc06g005060	TCCAAAGATGGTCAGACCCGTGAA	119	67.6	86.2
		ATACCTAGCCTTGGAGTACTTGGG		59.8	
<i>ETI-specific gene²</i>	Solyc09g092500	TTGGACAGATCAAGGGACTAATG	95	54.3	99
		CACTCTCAACCACACCATCTT		54.7	
<i>PTI-specific gene²</i>	Solyc02g069960	AGCCAACAAAGCTCAGGAA	100	54.6	100
		CATCCCAGTTGCCATGTTCTA		54.9	

Primer sequence obtained from:

- 1 Muller, O. A. *et al.* Genome-wide identification and validation of reference genes in infected tomato leaves for quantitative RT-PCR analyses. *PLoS ONE* **10**, e0136499, doi:10.1371/journal.pone.0136499 (2015).
- 2 Pombo, M. A. *et al.* Transcriptomic analysis reveals tomato genes whose expression is induced specifically during effector-triggered immunity and identifies the Epk1 protein kinase which is required for the host response to three bacterial effector proteins. *Genome Biol* **15**, 492, doi:10.1186/s13059-014-0492-1 (2014).



Supplementary Fig. S2: Validation of primer pairs of tomato candidate reference genes for RT-qPCR experiments. PCR amplification specificity was measured by the presence of unique amplicons using melting curve analysis.



Supplementary Fig. S3: Expression pattern of selected reference genes along all the treatments performed for validation. Tomato leaves were syringe-infiltrated with 10 mM MgCl₂ (MgCl₂), 10⁸ cfu/mL *Pseudomonas fluorescens* 55 (Pf), 5 x 10⁶ cfu/mL *Pseudomonas syringae* pv. *tomato* DC3000 (Pst DC3000) or 5 x 10⁶ cfu/mL *Pst* DC3000 Δ avrPto Δ avrPtoB ($\Delta\Delta$). Samples were taken at 6 and 12 h after infiltration. Expression of reference genes was determined by RT-qPCR. Symbols indicate the average Cq of three biological replicates with three technical replicates and error bars represent standard deviation.