

A novel isoprene synthase from the monocot tree *Copernicia prunifera* (Arecaceae) confers enhanced drought tolerance in transgenic *Arabidopsis*.

Yu Jiamei^{1,2}, Iuliia Khomenko³, Franco Biasioli³, Mingai Li^{1,4} and Claudio Varotto^{1,4}

¹ Biodiversity, Ecology and Environment Area, Research and Innovation Centre, Fondazione Edmund Mach, via Mach 1, 38098, San Michele all'Adige, Trento, Italy

² Department of Biology, University of Padova, Via Ugo Bassi 58B, Padova 35121, Italy

³ Food and Nutrition Area, Research and Innovation Centre, Fondazione Edmund Mach, via Mach 1, 38098, San Michele all'Adige, Trento, Italy

⁴ NBFC, National Biodiversity Future Center, Palermo 90133, Italy

Supplementary Table S1: Primers used in this study.

Primer name	Sequence (5' - 3')	Purpose
EgulSPS_GW-Rev1	GGAAACCCGTGCTCTCTAAGGAGTC	GenomeWalker
EgulSPS_GW-Rev2	GTCATCTTTGAACATCAAGTCTGCCCTC	GenomeWalker
ISPS_For	CCAAACAATAGAAGTAGCTCAAGC	full-length cDNA cloning
ISPS_Rev	CCCTTCTACACATTGCTGACC	full-length cDNA cloning
CprISPS_For	CACCATGGCATTCTCTACATGCTTCG	pENTR cloning
CprISPS_Rev	CTACACATTGCTGACCACCAACCT	pENTR cloning
pK7WG2_For	GACAATCTGATCCAAGCTCAAGC	Screening for transgene
CprISPS_RT_For	CAGCAATCAATCTTGGACGG	Semi-quantitative RT-PCR
CprISPS_RT_Rev	CTACACATTGCTGACCACCA	Semi-quantitative RT-PCR
DREB2A_RT_For	CTACAAAGCCTCAACTACGGAATAC	qRT-PCR
DREB2A_RT_Rev	AAACTCGGATAGAGAATCAACAGTC	qRT-PCR
COR15A_RT_For	GATACATTGGGTAAAGAAGCTGAGA	qRT-PCR
COR15A_RT_Rev	ACATGAAGAGAGAGGATATGGATCA	qRT-PCR
RAB18_RT_For	GGAAGAAGGGAATAACACAAAAGAT	qRT-PCR
RAB18_RT_Rev	GCGTTACAAACCCTCATTATTTTTA	qRT-PCR
AtEF1α_RT_For	TGAGCACGCTCTTCTTGCTTTCA	qRT-PCR; Semi-quantitative RT-PCR
AtEF1α_RT_Rev	GGTGGTGGCATCCATCTTGTTACA	qRT-PCR; Semi-quantitative RT-PCR
AtGAPDH_RT_For	TTGGTGACAACAGGTCAAGCA	qRT-PCR
AtGAPDH_RT_Rev	AAACTTGTCGCTCAATGCAAT	qRT-PCR

Supplementary Figure S1: Expression levels (semi-quantitative RT-PCR) of the *CpriSPS* transgene in the two Arabidopsis transgenic lines used in this study for all experiments. The gene *EF1 α* from Arabidopsis (*AtEF1 α*) was used as normalization control.

