



Figure S1. Representative images of citrus rootstock plants grown under hydroponic conditions after 4 weeks of B treatment. (A,B) Leaves of Carrizo citrange plants grown in culture media containing 0.05 mM (A) and 2.5 mM (B) H_3BO_3 ; (C,D) Leaves of 2247 x 6070-02-2 plants grown in culture media containing 0.05 mM (C) and 2.5 mM (D) H_3BO_3 .

Figure S2. Alignments of sequence of CsXIP1;1 (XM_052432608.1), CsXIP1;2 (MK084820.1), NtXIP1;1 (HM475295.1) transcript genes. Point indicates highly conserved nucleotides with CsXIP1;1 (XM_052432608.1). The multiple alignments were carried out using the NCBI BLASTN program.

Query	1	ATGAGTTTCTATCATGATCAGGTTTGGAGAGCATCATTGACTGAAGTGCTTGGTACAGCA	60
XM_052432608.1	1	.....	60
MK084820.1	172	..G.....A..G....GC.....	210
Query	61	CTGCTGGTGTTCGCATTAGACACCATAGTCATCTCCTCTATTCAGACAGATACAA-----	115
XM_052432608.1	61	.....	115
MK084820.1	211	G.....T..T...C.G.....A.....T.....C.....A.....C....AGACC	270
Query	116	-----TAATTGCGATTCTCCTTCTTGCCACT	141
XM_052432608.1	116	-----	141
MK084820.1	271	CCAAATCTTGTAATGTCAACTTTGGTCGCAATCA....AA.A..C.....AA....A...	330
HM475295.1	319	.....A..C..C...GT.	336
Query	142	TTCCCAATTTCTGGTGGCCACATCAACCCATTAGTCACCTTCTCAGCAGCACTCATCGGC	201
XM_052432608.1	142	.....	201
MK084820.1	331	..T.....G.....GT....TG.T.....CT...	390
HM475295.1	337	G..T..GG.G..C.....A....CG.CA..T.....C..C..G..TG....A	396
Query	202	--CACATGACCATCACAAGGGCAGCCATATACATTTTGGCTCAATGCGTCGGTGGAGTGT	259
XM_052432608.1	202	--.....	259
MK084820.1	391	AT.....T.....T.....CA.T.	448
HM475295.1	397	--ATT..AT....GT....A..CATT..T.....GG....A....T..T..A.C.A.T.	454
Query	260	TTGGAGCACTTGACCAAAAAGCTGTGGTCAGCACCAAAATTGAGCACGCATTTTCCCTTG	319
XM_052432608.1	260	.....	319
MK084820.1	449	.C..T....A...T.G.....G.C..AG.....CA..TAAT....A....	508
HM475295.1	455	.A..T....A..T.T.....A..A..T...T.T.CT....CA..AA.T..C..A....	514
Query	320	GTGGCCGCACCCTTATTGTTGTTGAACAACAACCAATGGGCCGTTGAGCTTGGGCTGG	379
XM_052432608.1	320	.....	379
MK084820.1	509	.A...T.....G.A.....G.T..CTGGG...G.....T.....A.C..CT...	568
HM475295.1	515	....TT.T...A.A.CA..AA...C..CGGGC.....A..ACAG.G..C..A.	574
Query	380	ATACAGGGGTGGCACTTTGGCTTGAGATATTTTGTTCATTCTGTTCTTTTTCGTCAA	439
XM_052432608.1	380	.....	439
MK084820.1	569	GG..TA..CA...C.....A....C..G..T.....T..TG	628
HM475295.1	575	.A.TG.CCCAA..TT.G.....C.....A....T..T.....T....	634
Query	440	TGTGGATGGCTTTTGATGAGAGGCAAGCCAAAGCTCTGGCCAGGGTTAGTGTTCATCA	499
XM_052432608.1	440	.....	499
MK084820.1	629	.....CTCC..A.....G....T.G...A....CC..A....TG	688
HM475295.1	635	.T.....A....C.T.....T..G..C..T.G.CTT..C.C...C.TGTC..	694
Query	500	TCCTTGGAGTAGTGTGGGTC-TCTTGATTTTGTGTCAACAACCTGTTACTGCCCAAAAG	558
XM_052432608.1	500	.....	558
MK084820.1	689	..A.....AC.....TC..G.....C..G.....T.....	747
HM475295.1	695	.TG....TA....T....C.T.....G..CA.C..G..T..G..C..CATGA....	753
Query	559	GGATACGGCGGTGCTGGGCGTAACCCGGCAAGGTGTTGGGCCCGCGTTCGTGAGAGGA	618
XM_052432608.1	559	.....	618
MK084820.1	748	..C..T.CT..A.....TC.....A..C.....A..AC....T.....	807
HM475295.1	754	..C....C..A..G...ATG..T....G.....C..GG.T..TG.T..T.....	813
Query	619	GGCCATCTCTGGGATCGACACTGGGTTTTCTGGGCCGGCCCGCTACTGCTTGCCTGGCA	678
XM_052432608.1	619	678
MK084820.1	808C.....G..G....TC.....	867
HM475295.1	814	..T.....T.....G.G..T...A.C..T....TT..G..TA...T.....T..A...	873

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Query          679   TTTGCCTTGTTACATAAAGTTAATTCCAAGTCAGCATCTCCATACCCATTGAGTAAACAAA   738
XM_052432608.1 679   .....                               738
MK084820.1     868   .....T.....CT...C.C.....A..T.G..C...   912
HM475295.1     874   ...TATG.....C....A.....   900

Query          739   TGCAGGAGTTATTGAAGGCTTTATCGTATCCGATTATCCATTATGGTTGCTGTAGTTGTT   798
XM_052432608.1 739   .....                               798

Query          799   CACAAATGCTACTTTGTGATGGTGGTGGTTTCAATCCTGGCAAATTGATGTTATTGTC   858
XM_052432608.1 799   .....                               858

Query          859   GGTATTAAGTTTGCTGTCT   877
XM_052432608.1 859   .....   877

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Table S1. List of primers used for quantitative real-time PCR analyses. Citrus primers used in quantitative RT-PCR analyses are listed.

Table S1. List of primers used for quantitative real-time PCR analyses			
Name	Locus ID ^{1,2}	Forward/reverse primer	
<i>CsXIP1;1</i>	¹ orange1.1g036381m	5'-ATCGACACTGGGTTTTCTGG-3' 5'-TGGAGATGCTGACTTGGAAT-3'	[54]
<i>CsUBI</i>	² XM_006493108	5'-TCTGAGGCTTCGTGGTGGTA-3' 5'-AGGCGTGCATAACATTTGCG-3'	In this work

¹ Code refers to the transcript name in the database available in the International Citrus Genome Consortium ([http:// www.phytozome.net/search.php](http://www.phytozome.net/search.php)).

²<https://www.ncbi.nlm.nih.gov>

Table S2: Results of BLASTN analysis. Blast analysis was performed using the sequence of *Citrus sinensis* *CsXIP1;1* gene (XM_052432608.1) as a query sequence using nucleotide collection (nt/nr) database (<https://www.ncbi.nlm.nih.gov>).

<u>Blast analysis using transcript gene sequence of <i>CsXIP1;1</i> as query sequence</u> (XM_052432608.1)						
Gene	Genbank accession number (NCBI)	Max score	Total score	Query coverage	E value	Percent Identity
<i>CsXIP1;2</i>	MK084820.1	568	568	80%	2e-156	76.18%
<i>NtXIP1;1</i>	HM475295.1	220	220	66%	1e-51	68.61%