

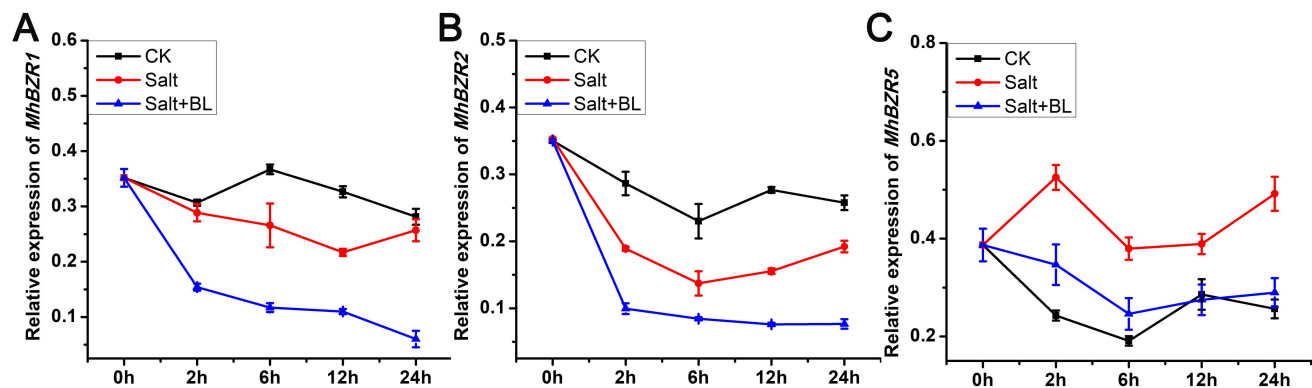
Supplementary Material

Exogenous Brassinolide Alleviates Salt Stress in *Malus hupehensis* Rehd. by Regulating the Transcription of NHX-type $\text{Na}^+(\text{K}^+)/\text{H}^+$ Antiporters

Qiufang Su, Xiaodong Zheng, Yike Tian, Caihong Wang*

*Correspondence: Caihong Wang: chw6068@126.com

1. Supplementary Figures



Supplementary Figure 1. Effects of exogenous BL application on the expression level of the *MhBZR1*, *MhBZR2* and *MhBZR5* in 24h under salt stress. Data represent the means $\pm$ SD of triplicate experiments.

Supplementary Material

2. Supplementary Tables

Table 1 The primers used for cloning, vector construction and qRT-PCR

Primer name	Forward primer	Reverse primer	Vector
MhNHX4-1 promoter	TAAACCGGCAGTTGTTG TCAGTTGCCCAATTGGC GGGGAA	TTCCCCGCCAATTGGGC AACTGACAACAAGTGC CGGTTTA	
MhSOS1 promoter	TTACGTGTGACTGGGAA GTTGGCTCCTTGACAT ATGTTC	GAACATATGTGCAAGG AGCCAAGTTCAGTCA CACGTAA	
MhBZR1 for cloning	ATGACGTCGGATGGGGC G	TTAAATCCGAGCCTTTC CA	
MhBZR2 for cloning	ATGACGTCTGACGGAGC AA	CATTGGCCGGAATCTGC	
MhBZR3 for cloning	ATGACAGGCGGTGGTTC AT	TCAAAACCCAGCTGGG A	
MhBZR4 for cloning	ATGACGTCGGGGACGCG A	TCAGAAATAACGAGTT CGC	
MhBZR5for cloning	ATGATGACGTCGGAAC G	ACCTGGTCCGAGTGCTC C	
MhBZR6 for cloning	ATGACGTCGGAACCAG A	TTACCTYGTTTCGAGTGC TC	
MhBZR1-pGEX6P -1	GGATCCATGACGTCGGA TGGGGCG	CTCGAGTTAAATCCGAG CCTTTCCA	pGEX6P -1
MhBZR2-pGEX6P -1	GGATCCATGACGTCTGA CGGAGCAA	CTCGAGCATTGGCCGG AATCTGC	pGEX6P -1
MhBZR3-pGEX6P -1	GGATCCATGACAGGCGG TGGTTCAT	CTCGAGTCAAAACCCA GCTGGGA	pGEX6P -1
MhBZR4-pGEX6P -1	GAATTCATGACGTCGGG GACGCGA	CTCGAG TCAGAAATAACGAGTT CGC	pGEX6P -1
MhBZR5-pGEX6P -1	GGATCCATGATGAC GTCGGGAACG	CTCGAGACCTGGTCCGA GTGCTCC	pGEX6P -1
MhBZR6-pGEX6P -1	GGATCCATGACGTCGGG AACCAGA	GAATTCTTACCTYGTTT GAGTGCTC	pGEX6P -1
MhNHX1-3-qPCR	GCTTATGCGTGGCTCTGT TTC	CGGGTCCTATGTTTGCC TCTG	
MhNHX4-1-qPCR	CATACTCAACAGCGTGG AAACG	TAAGGAACGAACCCTC TACCG	
MhNHX4-2-qPCR	GGATGCCTTGACATTG AGAA	AAGCAAGAGCCACGGA TACAG	

MhNHX5-1-qPCR	TCAAAGGTAGTCGGGGG TAGAG	TTCCGTATTAGAGATG TTAGCAAGT
MhNHX5-2-qPCR	AGTCAAACGCCAAGCAG CAC	ATGGTGGGACTGGAGG AAGG
MhSOS1-qPCR	TCCGGTTAATCCATCAC ACACCGT	TTTGCTGCCCTGGAGGA TTTGTTG
MhBZR1-qPCR	CCAAGCACTGCGACAAC AA	GACTGGGATAGGACGA AGACG
MhBZR2-qPCR	CCCAAGCACTGCGACAA CA	GGATAGCACGAAGACG AAGGAC
MhBZR3-qPCR	GAGGATGGCACCACCTA CCG	CTGGGATTTCAACAAG AAAGCAAG
MhBZR4-qPCR	TCCACAGCGGCTCTATC AGT	TCGGAATCCCAGCAAA CCAT
MhBZR5-qPCR	GGGCAGCATTACCCTTT CCT	CGAGATCATCTGATACG CATTCC
MhBZR6-qPCR	TAAGCACTGCGACAACA ACG	CCATCACAATCTCAAAC CCAC
MhActin	CTTCAATGTGCCTGCCAT GTAT	AATTTCCCGTTCAGCAG TAGTG
