

Supplementary Materials

Table S1. Primers used in qRT-PCR.

Gene Name	Gene ID	Primer Sequence (5'→3')
<i>VrCAT</i>	106762083	F: GTATGATCCTGTTCGTCATG R: GATTCCTTTGCTAACAGGTG
<i>VrPOD</i>	106755305	F: CGCCGCTGAGAGAAAGAGAA R: ATCAACGACACCACAGAGGC
<i>VrCu/Zn-SOD</i>	106764186	F: CGGAAATGGTCCAACAACCTG R: TGGTCCAGTTGAAAGGCAAC
<i>VrMn-SOD</i>	106752768	F: CTCTGCCGTCGTAAAGCTCC R: TGCTGCACCTTCTGCATTAAC
<i>VrAPX</i>	106756347	F: GATGTGTTTCGGCAAGGCTATG R: CGGACCCTCAAATCCTGAACG
<i>VrMDHAR</i>	106769137	F: ACACGCAACTACAGTGGAGG R: CTCCCAAATGGGCAATCCCT
<i>VrDHAR</i>	106769672	F: GGTGCCAGTGGCTCTTTTGT R: ACGCTTGCTCTGTTCCATCA
<i>VrGR</i>	106770425	F: GGTGTAGAACAAGGGACGCA R: TTGAGCCCTGCTACCAGTTG
<i>VrGPX</i>	106766812	F: TGACAAGGATGGGCAAGTGG R: TGACGTTTCATCACACGCTCT
<i>VrActin3</i>	106757568	F: ACCTTCAACACTCCTGCTATG R: TCGTAAATAGGAACCGTGTGAC
<i>VrGAPDH</i>	106756453	F: TGTGATTTCTGCCCCAAGCA R: GAGCAAGGCAATTGGTGGTG

Figure S1.

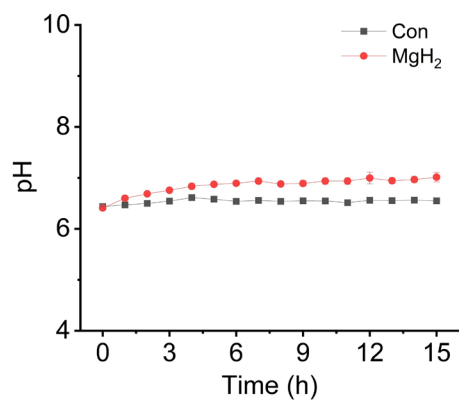


Figure S1. The kinetic curve of pH value in MgH₂ solution. The MgH₂ (0.01 g L⁻¹) were dissolved in half-strength Hoagland's solution (pH 6.4). Afterwards, the pH value was time-dependently recorded by pH meter. The mean and \pm SD values were obtained from three independent experiments with three biological replicates for each.

Figure S2.

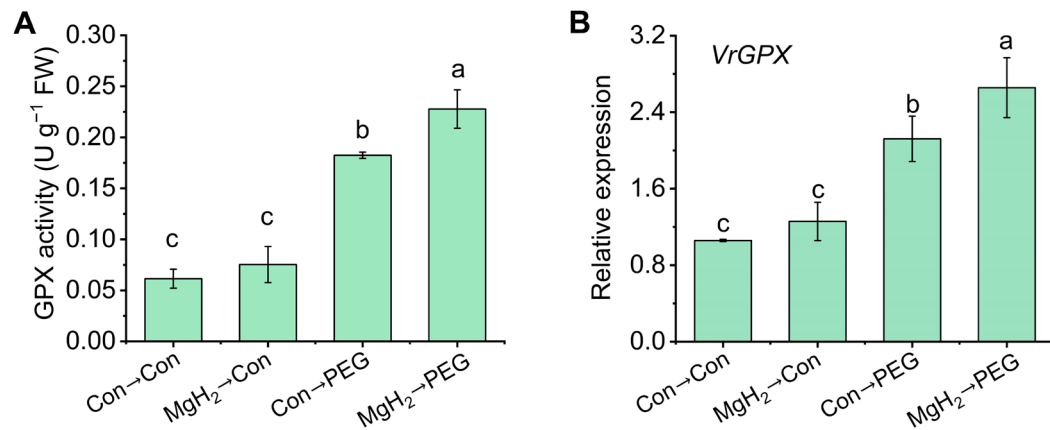


Figure S2. The activity of GPX and corresponding gene expression were regulated by MgH₂ under osmotic stress. After different treatments for 2 days, the activities of GPX (**A**) from roots were detected. After different treatments for 1 day, corresponding transcriptional levels (**B**) was also analyzed. The mean and \pm SD values were obtained from three independent experiments with three biological replicates for each. The different letters indicate significantly different values ($P < 0.05$ according to Tukey's multiple range test).