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       ACGCAGAGTACATGGGGATCGAAAAAAAGCCTGTTAATCCTTCGAAAAGCCGCCACTCTT
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       TTTCTCTCTCCTAGGGTTTTCAATTCGCTGCAATTTTCCGACTTTTTCATTTTCAAGAAT
       CCAAGTGCTGGTTAGAGAAGCCGTTATTTTGGTTCATTCTTGATTTCCCCTTTTTCTTGT
       GAATGATCTAATGGAATCAAAAGGTGGTAAAGACGATTCTAGTAGTAGTAGTAGTAAATC
       CTTGTTCACCCCACTCGACTACGGCATTGAAGACGTTCGACCAAAAGGAGGAATCAAGAA
       ATTCAGATCTGCTGCTTACTCAAACTGCGCTCGCAAACCATCCTGATATTCCCCGTGCAC
       CGCCTGCTCGACCACGTGAAGTGGTTTAATTTAGTTTTAATTTTTGCATTAGAAATAACA
       GCTTTTGATTACAAGTTCCTTTCTTCTTCTGCTTCCCTCTTTCCTCTGCAACTCCGGTTC
661    CTCTTTGCGACTGTGAGACGTTCTTTTAAGCAATCTAGCTATGACGGTTCCCATGGTTGG
                                                M  T  V  P  M  V  G
721    AGACAACAACGACAACAACATGACGATTTCTGCTATTGGATTTGAAGGGTATGAAAAGAG
         D  N  N  D  N  N  M  T  I  S  A  I  G  F  E  G  Y  E  K  S
781    GCTAGAGATAACGTTCTTTGAGCCTGGTATTTTTGTTGATGCTGACGGGAAGGGCCTCCG
         L  E  M  T  F  F  E  P  G  I  F  V  D  A  D  G  K  G  L  R
841    TGCTTTATCTAAGGATCAGTTGGATGAGATCCTTGGCCCTGCTGAGTGCACCATTGTTGA
         A  L  S  K  D  Q  L  D  E  I  L  G  P  A  E  C  T  I  V  D
901    CTCTCTTGCGAATGAAAGTGTAGACTCATATGTTCTATCCGAGTCTAGCCTCTTTGTGTA
         S  L  A  N  E  S  V  D  S  Y  V  L  S  E  S  S  L  F  V  Y
961    CTCATACAAGATCATCATAAAAACTTGTGGGACTACGAAGCTGCTCCTTGCAATCCCACC
         S  Y  K  I  I  M  K  T  C  G  T  T  K  L  L  L  A  I  P  P
1021   CATTTTGAAGTTGGCTGCAAGCCTATCCCTTGATATCAAAGCTGTCCGATACACTCGTGG
         I  L  K  L  A  A  S  L  S  L  D  I  K  A  V  R  Y  T  R  G
1081   CAGTTTTATTTTCCCAGGAGCTCAGTCTTTCCCTCACCGAAGCTTCTCTGAAGAAGTTGC
         S  F  I  F  P  G  A  Q  S  F  P  H  R  S  F  S  E  E  V  A
1141   TGTTCTTGATGGTTACTTTGGGAAGCTTGCTGCAGGCAGCAATGCCTTTGTGATGGGGAA
         V  L  D  G  Y  F  G  K  L  A  A  G  S  N  A  F  V  M  G  N
1201   TCCTTCTAAGCCCCAGAAATGGCATGTTTACTGTGCATCCGCCGAAACAACAGCCAGCTA
         P  S  K  P  Q  K  W  H  V  Y  C  A  S  A  E  T  T  A  S  Y
1261   TGATGACCCTGTTTATACTCTTGAGATGTGCATGACTGGGCTTAACAAGGAGAAAGCTTC
         D  D  P  V  Y  T  L  E  M  C  M  T  G  L  N  K  E  K  A  S
1321   AGTGTTCTTCAAAGCTCAATCTGACTCAGCTGCTGTGATGACTGAAAGCTCTGGAATCCG
         V  F  F  K  A  Q  S  D  S  A  A  V  M  T  E  S  S  G  I  R
1381   TAAGATCCTTCCAGACTCAGCGATTTGTGACTTTGATTTTGAACCTTGTGGTTATTCAAT
         K  I  L  P  D  S  A  I  C  D  F  D  F  E  P  C  G  Y  S  M
1441   GAACGCTATTGAAGGACCTGCTGTCTCTACCATCCACATAACTCCAGAAGATGGTTTTAG
         N  A  I  E  G  P  A  V  S  T  I  H  M  T  P  E  D  G  F  S
1501   TTACGCGAGTTTTGAAGCTGTGGGCTATGACCTTAAGATGATTGATTTGAACCAGCTGGT
         Y  A  S  F  E  A  V  G  Y  D  L  K  M  I  D  L  N  Q  L  V
1561   AGAGAGGGTCCTCGCTTGCTTTGAACCGAGTGAGTTCAGTATAGCTATTAATGCTGATAT
         E  S  V  L  A  C  F  E  P  S  E  F  S  M  A  I  N  A  D  I
1621   TGCTGCCTATCCAAAGGAGCAAAACTGTACCGTGAACGCCAACGGTTACAGTCGTGAAGA
         A  A  Y  P  K  E  Q  N  C  T  V  N  A  N  G  Y  S  R  E  E
1681   GGGTGGCATTGAAGAGCTTGGCTTTGGTGCTTCTGTATTCTACCAGAAGTTCTGCAAGGC
         G  G  I  E  E  L  G  F  G  A  S  V  F  Y  Q  K  F  C  K  A
1741   TACAACTATGATTGGTTTTACCAAGCCTGCTCTGAAATGCCTCTGGAAAGAGGAGAAAAA
         T  T  M  I  G  F  T  K  P  A  L  K  C  L  W  K  E  E  K  K
1801   AGAAGAAGAAATGAATTAGTACTTCATTTTATGTGTTCCATCTTTTTTTTTTTTTGAAAT
         E  E  E  M  N  *
1861   AAGAGTCCGGTCTTGAACCTGATTTTATGGTTATCTTTTCAGTGTCCCGTGTTGGAATAT
1921   TTTTATATTGTTATAATTTGAAGTGTATCCCGGATTATGC
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Figure S1. Sequence analysis of a cDNA encoding a *BvM14-SAMDC* isolated from the monosomic addition line M14 roots. Nucleotide and deduced amino acid sequence of the *BvM14-SAMDC*.

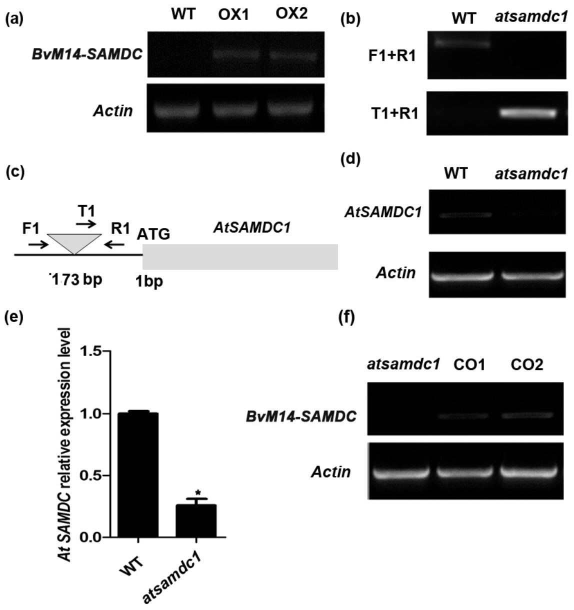

Figure S2. Identification of *atsamdc1* mutant and overexpression of *BvM14-SAMDC* in Arabidopsis. (a) RT-PCR analysis of the expression levels of the overexpressed *BvM14-SAMDC* (OX1 and OX2) in Arabidopsis; (b) PCR genotyping analysis of the T-DNA insertion in the *atsamdc1* mutant (KD); (c) Structure of the *AtSAMDC1* gene. The T-DNA insertion site was at 173 bp upstream of the start codon. The primers used to identify the T-DNA insertion were marked with arrows; (d) RT-PCR analysis of the expression levels of *AtSAMDC1* in *atsamdc1* mutant (complementation lines, CO) and wild type (WT); (e) Real-time PCR analysis of the expression levels of *AtSAMDC1* in the *atsamdc1* mutant; (f) RT-PCR analysis of the expression levels of the overexpressed *BvM14-SAMDC* (CO1 and CO2) in *atsamdc1* mutant. Asterisk (*) indicates significantly different at $P < 0.05$. Three biological replicates were performed. Please refer to supplementary materials for the primers used.

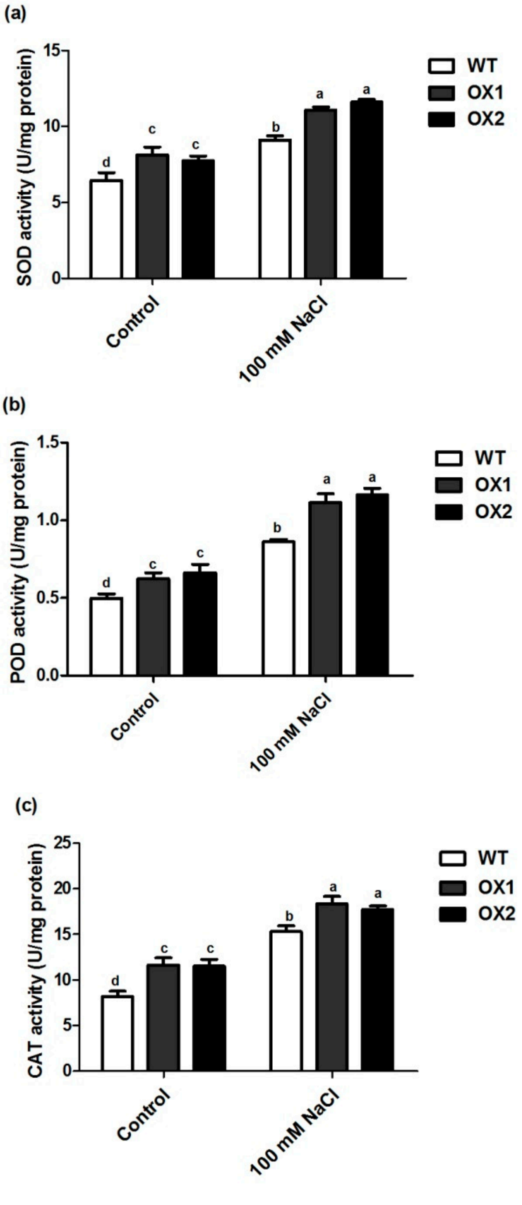

Figure S3. Effects of salt stress on antioxidant enzyme system in the roots of wild type (WT), *BvM14-SAMDC*-overexpression in WT Arabidopsis (OX). Antioxidant enzyme activities (b to d)under control and salt stress (100 mM NaCl) conditions.

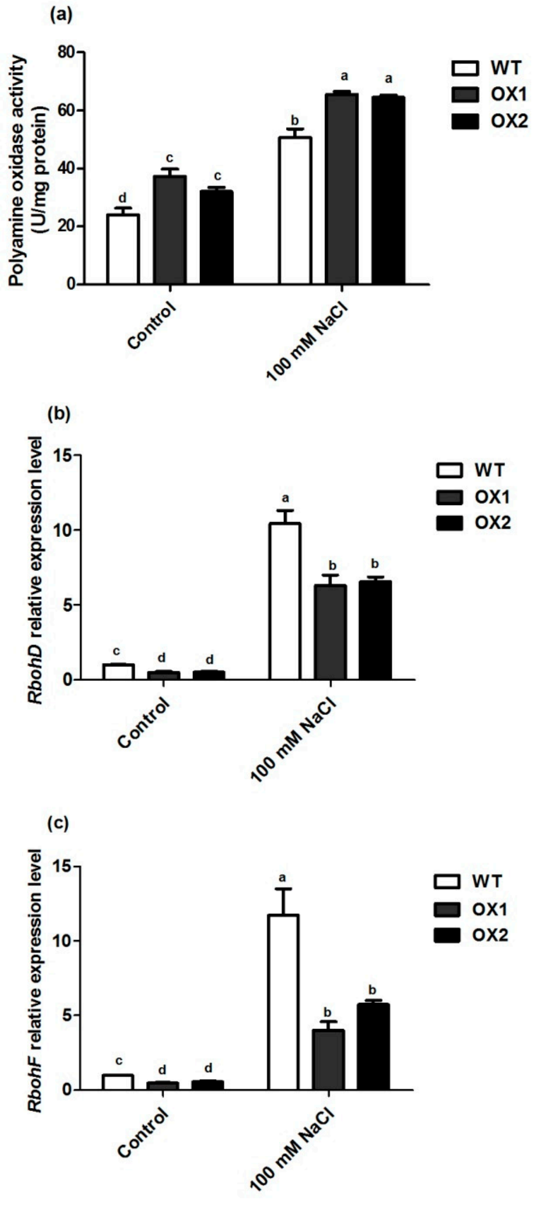

Figure S4. Effects of salt stress on polyamine oxidase (PAO) activity and mRNA levels of *RbohD* and *RbohF* in the roots of wild type (WT) and *BvM14-SAMDC*-overexpression in WT Arabidopsis (OX). (a) PAO activity; (b) mRNA levels of *RbohD*; and (c) mRNA levels of *RbohF* under control and salt stress (100 mM NaCl) conditions.

Table S1 List of the RT-PCR primer

Primer name	**Primer sequence**
AtRbohD-F（QRT-PCR）	5-TCAGGGACGACTCGGTGG-3
AtRbohD-R（QRT-PCR）	5-GTTTATCGAAACGTTGGTC-3
AtRbohF-F（QRT-PCR）	5-GTTCGATGCATTGAGTAG-3
AtRbohF-R（QRT-PCR）	5-TTTAATCTTGATAGCTTATT-3
BvM14 SAMDC-F（QRT-PCR）	5′-GCTGCTGTGATGACTGAAAG-3′
BvM14 SAMDC-R（QRT-PCR）	5′-TCTTCTGGAATGTGGATGG-3′
18S rRNA-F（QRT-PCR）	5-CCCCAATGGATCCTCGTTA-3
18S rRNA-R（QRT-PCR）	5-TGACGGAGAATTAGGGTTCG-3
Actin-F（Semi-QRT-PCR）	5-ACTCTTAATCAATCCCTCCACC-3
Actin-R（Semi-QRT-PCR）	5-CTGTATGACTGACACCATCACC-3
BvM14 SAMDC-F（Semi-QRT-PCR）	5-TGATGACCCTGTTTATACTCT-3
BvM14 SAMDC-R（Semi-QRT-PCR）	5-TCACTCGGTTCAAAGCAAGC-3
AtSAMDC1-F（Semi-QRT-PCR）	5-AAGTCCCAGCTTGATGAAATTC-3
AtSAMDC1-R（Semi-QRT-PCR）	5-GTGAGGAAAAGGCTGGCCTC-3