

Supplementary Materials: Overexpression of S-Adenosyl-L-Methionine Synthetase 2 from Sugar beet M14 Increased *Arabidopsis* Tolerance to Salt and Oxidative Stress

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1      ATCTACTCTCTCACTCTCTTCGTCGAGGAATGAGAGCCCTCCATTTCACCTCCGAGTCT
1      H E T F L E T S E S
61     GTGAACGAGGGACACCCTGACAAGCTCTGTGATCAGGTGCTGATGCACTGCTCGACGCT
11     V N E G H P D K L C D Q V S D A V L D A
121    TGCCCTTGCCGAGGACCCTGAGAGCAGGTTGCTTGAGAGCTTGACTAAGACCAACATG
31     C L A Q D P E S K V A C E T C T K T N M
181    GTTATGGTCCTTGTGAGATTACCAACCAAGGCCGAGGTAGACTATGAAAAGATTGTCGCT
51     V H V F G E I T T K A E V D Y E K I V R
241    GACACATGCGCTTCCATTGGCTTCACGTCTGATGATGTTGGTCTTGATGCTGACAAATGC
71     D T C R S I G E T S D D V G L D A D K C
301    AAGGTCCTGTCATATTGAGCAGCAGAGCCAGACATTGACAGGGTGTCCATTGGTCAC
91     K V L V N I E Q Q S P D I A Q G V H G H
361    CTCACCAAGCGCCCTGAGGAGATTGGTGCTGGTGATCAAGGCCACATGTTTGGCTATGCTC
111    L T K R P E E I G A G D Q G H M F G Y A
421    ACTGATGAGACCCCGGAGCTTATGCTCTAGCCACGTTCTTGCCACCAAGCTTGGTGCT
131    T D E T P E L H P L S H V L A T K L G A
481    CGCCTCACTGAGGTGCGCAGGAATGGGACCTGTGCTGCTGAGACCTGATGTTAGACT
151    R L T E V R K N G T C A W L R P D G K T
541    CAGTTACTGTTGAGTACTACATGACATGGTGGCCTGATGCTGTTGGGTTGACACT
171    Q V T V E Y Y N D N G A H V P V R V H T
601    GTCCCTTATATCACCACACGATGAGACTGCTTCATGATGAAATTGCTGCTGACCTT
191    V L I S T Q H D E T V S N D E I A A D L
661    AAGGAGCATGTCTCAACCCGCTCATCCCTGAGAAGTATCTTGATGAGAAGACCATCTTC
211    K E H V I K P V I P E K Y L D E K T I F
721    CACCTTATCCATCTGGCCGATTTGTATTTGGTGGACCTCATGAGATGCTGCTCTCACT
231    H L N P S G R F V I G G P H G D A G L T
781    GGTCGCAAGATCATTATCGACACATACGGTGGATGGGAGCTCATGTTGGTGCTGCTTC
251    G R K I I I D T Y G G W G A H G G G A F
841    TCTGGCAAGACCCCAACCAAGGTGGACAGAAGTGGTCTTATTCGTCAGACAGGCTGCT
271    S G K D P T K V D R S G A Y I V R Q A A
901    AAGAGCATAGTTGCCAATGGGCTCGCTCGCAGGGCCATTGTTCAAGGTTCATATGCCATT
291    K S I V A N G L A R R A I V Q V S Y A I
961    GGTGTCCTGAGCCTTTGTCGCTGTTGTTGACACCTATGGCACTGGAAGATACCCGAT
311    G V P E P L S V F V D T Y G T G K I P D
1021  AAGAGATTCTTAGATTGTCAAGGAGACCTTTGACTTCAGGCCAGGAATGATGCTATC
331    K E I L K I V K E T F D F R P G H M S I
1081  AACCTTGATCTCAAGAGAGGTGCAATGCGAGATTCCAGAAGACAGCTGCATACGGGCAC
351    N L D L K R G G N G R E Q K T A A Y G H
1141  TTTGAGAGAGATGACCCAGACTTCACCTGGGAGGTGCTCAAGCCCTGAAAGTGGGAGAA
371    F G R D D P D F T W E V V K P L K W E K
1201  ATCCCTGCGTATGCCCCACTAATGCTACTGCTGCTCAAGTACGCGGAACCCATGCTGCT
391    I P A *
1261  TGATCCCTTTTATATGCTGATCTTTTCCATTGAATTTTCCAAATTCGATTGATGAT
1321  TCATGTAAGATTGAAATGAAATGATTTACGTTTGTGCTGTTTGGTACTTGAAAGTAGCC
1381  TAAAGCGTTGCTGAAATGCTGACCTGCAAGCATGCAAGCTGATGATTTGATGCTCTACTA
1441  AACCTTATTATTTGAAGATATTGTACATGAACAAATGCAATTTTATGATGTTGCTCAT
1501  TCATATCTAGCGAAAAAAGAAAAAAGAAAAAAGAAAAAAGAAAAAAGAAAAAAGAAAAA

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Figure S1. Sequence analysis of a cDNA encoding a *BvM14-SAMS2* isolated from the monosomic addition line M14 roots. Nucleotide and deduced amino acid sequence of *BvM14-SAMS2*.

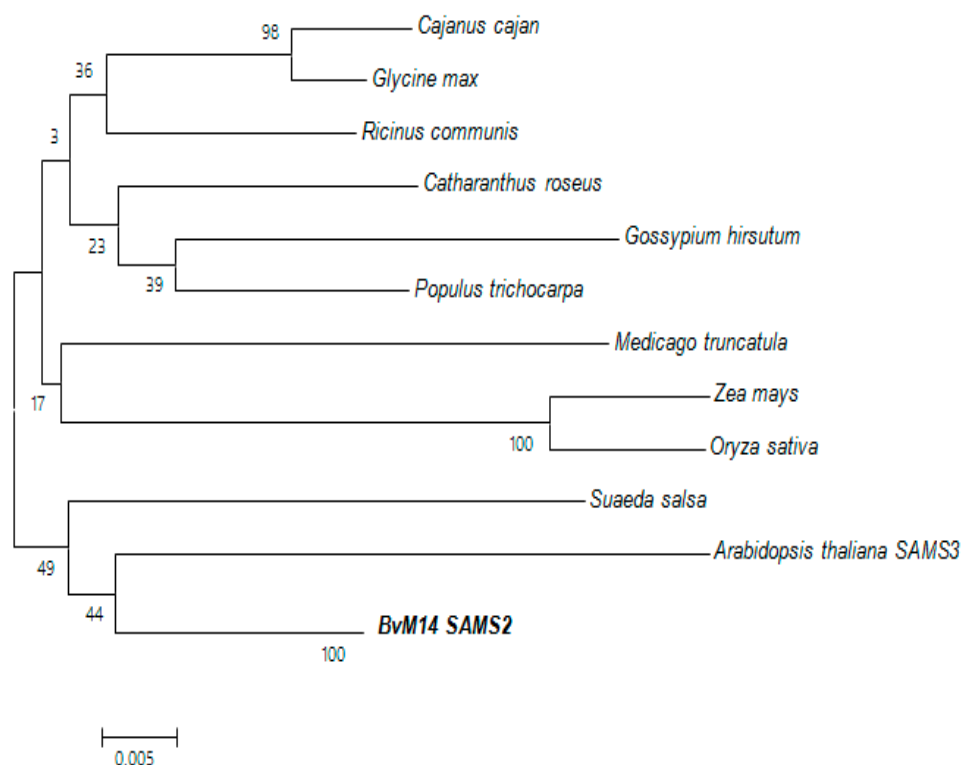


Figure S2. Phylogenetic tree of *BvM14-SAMS2* and *SAMS* gene members. The name of the gene (*BvM14-SAM2*) isolated in this study is in bold.

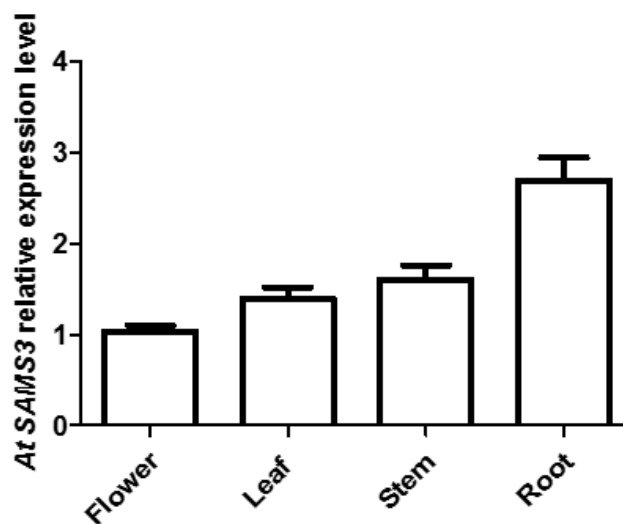


Figure S3. Tissue specific expression of *AtSAMS3* gene in *Arabidopsis* plants

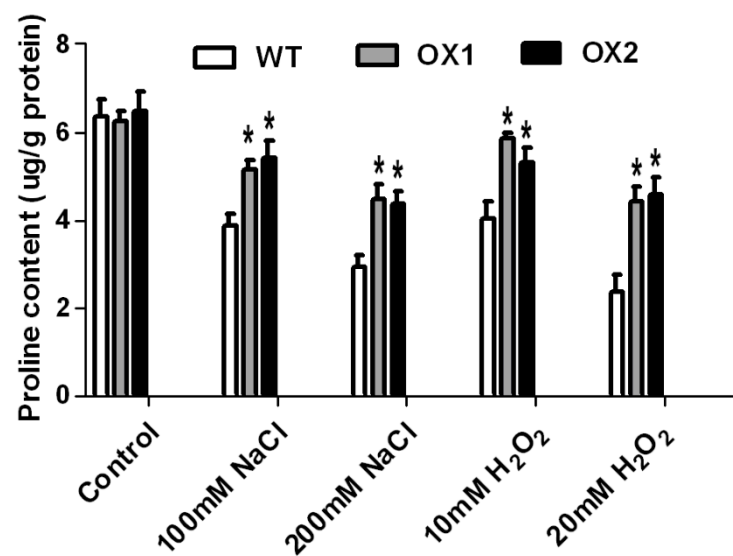


Figure S4. Effects of salt and H₂O₂ stress on proline content in wild type (WT) and *BvM14-SAMS2*-overexpressed seedlings in wild type Arabidopsis (OX).

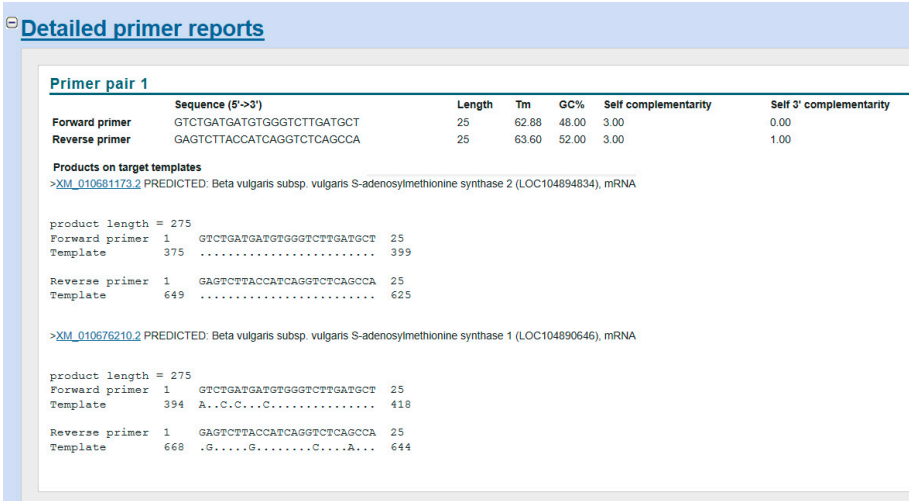


Figure S5. Primer-BLAST result for *BvM14- SAMS2* in sugar beet genome.