

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      ATCTACTCTCTCACTCTCTTCGTCACAGGAAATGGAGACC TTCC TATTACCTCCGAGTCT
1      K E T F L E T S E S
61     GTGAAAGAGGGACACCC TGACAACTCTGTGATCAGG TGTC TGATGCA GTGC TCAGCGCT
11     V N E G H P D K L C D Q V S D A V L D A
121    TGCC TTGCC CAGGACCC TGAGAGCAAGG TTGCTTG TGAGAC TTG TACTAAGACCAACATG
31     C L A Q D P E S K V A C E T C T K T N M
181    GTTATGGTC TTGTGAGATTCAACCAAGGCCGAGG TAGACTATGAAAAGATTGTCGCT
51     V H V F G E I T T K A E V D Y E K I V R
241    GACCAATGC CGTTCCATGGCTTACGTCTGATGATG TGGTC TTGATGCTGACAAATGC
71     D T C R S I G E T S D D V G L D A D K C
301    AAGGTC TTGGTCAATATTGAGCAGCAGAGCCAGACA TTGCACAGG GTGTCCATGGTCAC
91     K V L V N I E Q Q S P D I A Q G V H G H
361    CTCACCAAGCGCCCTGAGGAGATTGG TGCTGGTGA TCAAGGCCACATG TTGCGCTATGCC
111    L T K R P E E I G A G D Q G H M F G Y A
421    ACTGATGAGACCCCGGAGCTTATGCC TC TAGCCACG TTCTTGCCACCAAGCTTGGTGC T
131    T D E T P E L H P L S H V L A T K L G A
481    CGCCTCACTGAGG TGCGCAAGATGGGACC TGTGCATGGCTGAGACCTGATG GTTAGACT
151    R L T E V R K N G T C A W L R P D G K T
541    CAAGTTACTGTTGAG TACTCAATGACCAATGGTGC CATGGTACCTG TTGCGGTTACACT
171    Q V T V E Y Y N D N G A H V P V R V H T
601    GTCC TTATATC CACC CAACACGATGAGACTGTC TC CAATGATGAAATTGC TGCTGACCTT
191    V L I S T Q H D E T V S N D E I A A D L
661    AAGGACATGTCA TCAACCCGCTCATCCCTGAGAGTATCTTGATGAGAAAGACCATCTTC
211    K E H V I K P V I P E K Y L D E K T I F
721    CACCTTATCCATCTGGCCGATTTGT TATTGGTGGACCTCATG GAGATGC TGCTCTCACT
231    H L N P S G R F V I G G P H G D A G L T
781    GGTCGCAAGATCATTATCGACACATCGGTGGATGGGAGC TCATGGTGG TGCTGCTTTC
251    G R K I I I D T Y G G W G A H G G G A F
841    TCTGGCAAGACCCCAACCAAGG TGGACAGAAGTGG TGCTTATTCGTCAGACAGGCTGCT
271    S G K D P T K V D R S G A Y I V R Q A A
901    AAGACCATRGTG CCAATGGGC TC GC TC GCAGGGC CATGTTTCAGG TGTCATATGCCATT
291    K S I V A N G L A R R A I V Q V S Y A I
961    GGTC TCCTGAGCCTTTGTC CGTG TTTG TGACACCTATGGCACTG GAAAGATCCCGAT
311    G V P E P L S V F V D T Y G T G K I P D
1021  AAAGAGTTCTTAGATTGTCAAGGAGACC TTTGACTTCAGGCCAGGAATGATG TCTATC
331    K E I L K I V K E T F D E R P G M H S I
1081  AACCTTGATCTCAAGAGAGG TGSCAATGGCAGATTCCAGAAAGCAGCTGCATACGGGCAC
351    N L D L K R G G N G R E Q K T A A Y G H
1141  TTGGAAGAGATGACCCAGACTTCACCTGGGAGGTGCTCAAGCCCC TGAAGTGGGAGAAA
371    F G R D D P D E T W E V V K P L K W E K
1201  ATCCCTGCGTATGCCCCTAATATGCTACTGCTGCTCAAGTACGCGGAAACCATGCAATG
391    I P A *
1261  TGATCCCTTTT TATATGTC TGATCTTTTCCATTGAATTTTTCCAA TTTGATTCGAT
1321  TCATGACTGATTGAAA TGAAA TGATTTAC TGTTGCTG TTTTGGTAC TTGAAAGTAGCC
1381  TRAGCGTTGCTGAAA TCGTGC GACC TG CAGG CATGCAAGC TGGA TGA TTG GATGCTACTA
1441  AACCTATTAA TTGAAGATA TTGTAC TAGAACAAA TGCA TGT TTTTATG TRGTTGTGAT
1501  TC GAATCTAGC GAAAAA AAAAAAAAAAAAAAAAAAAAAA
    
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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*.

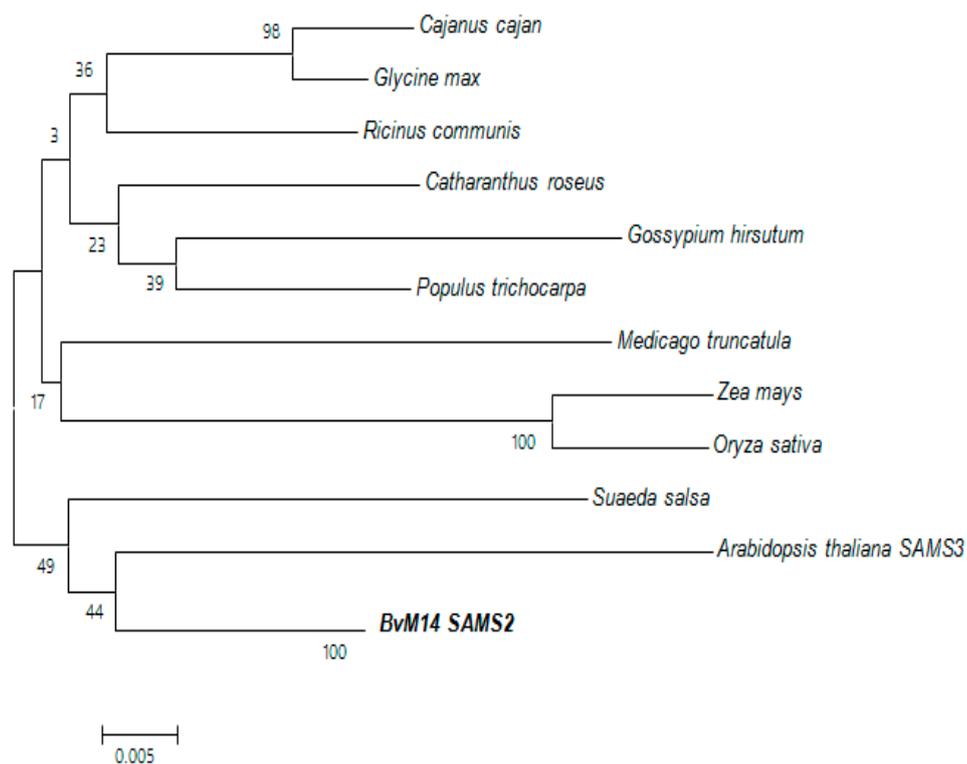


Figure S2. Phylogenetic tree of *BvM14-SAMS2* and *SAMS* gene members. The name of the gene (*BvM14-SAMS2*) isolated in this study is in bold.

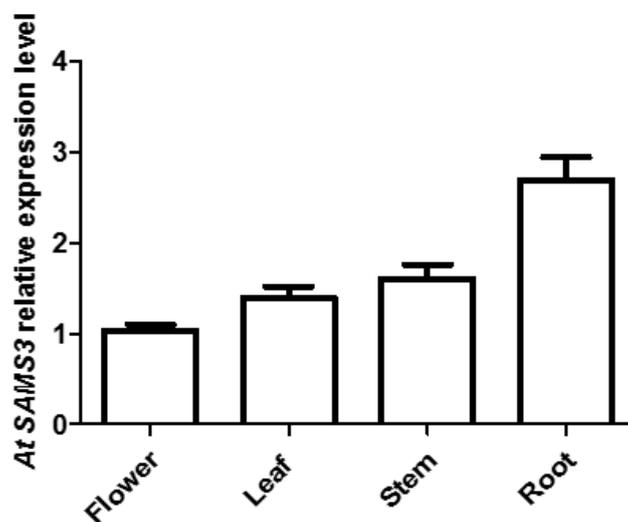


Figure S3. Tissue specific expression of *AtSAMS3* gene in *Arabidopsis* plants

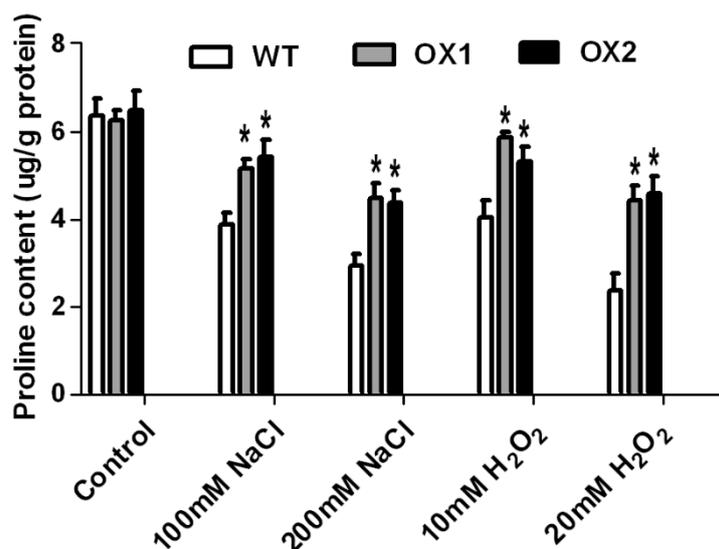


Figure S4. Effects of salt and H₂O₂ stress on proline content in wild type (WT) and *BvM14-SAMS2*-overexpressed seedlings in wild type Arabidopsis (OX).

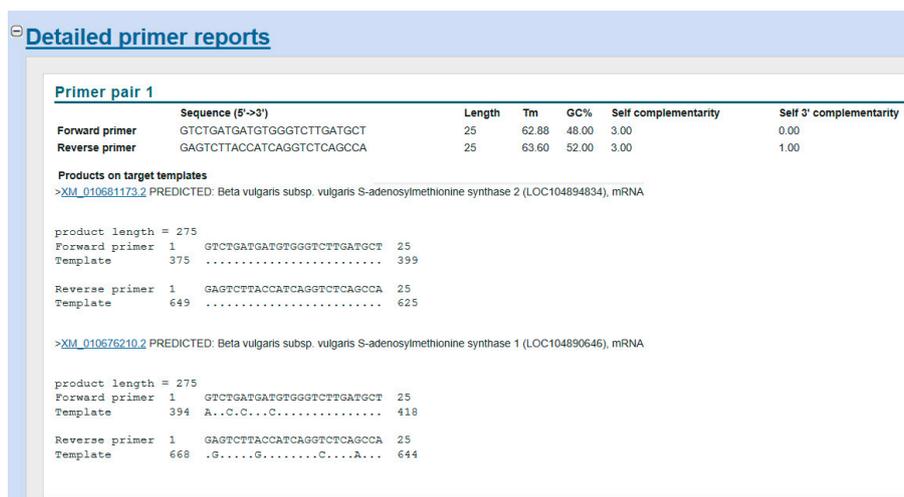


Figure S5. Primer-BLAST result for *BvM14-SAMS2* in sugar beet genome.