

**S-Nitrosogluthione reductase (GSNOR) mediates the biosynthesis of  
jasmonic acid and ethylene induced by feeding of the insect herbivore  
*Manduca sexta* and is important for jasmonate-elicited responses in *Nicotiana  
attenuata***

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**Supplementary Material**

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1  -----EPNKPLVI EDVQVAPPQAGEVRVKVLYTAL CHTDAYTWSGKDPEGLFPCVLGHE N. attenuata
1  MATQGQVI TCKAAVAWEPNKPLVI EDVQVAPPQAGEVRVKVLYTAL CHTDAYTWSGKDPEGLFPCVLGHE S. lycopersicum
1  MATQGQVI TCKAAVAWEPNKPLVI EDVQVAPPQAGEVRVKVLYTAL CHTDAYTWSGKDPEGLFPCVLGHE A. thaliana

55  AAGI VESVGEVTEVQPGDHVI PCYQAECRECKFKSGKTNL CGKVRAATGVGVMNDRKSRFSI NGKPI N. attenuata
71  AAGI VESVGEVTEVQPGDHVI PCYQAECRECKFKSGKTNL CGKVRAATGVGVMNDRKSRFSI NGKPI S. lycopersicum
71  AAGI VESVGEVTEVQPGDHVI PCYQAECRECKFKSGKTNL CGKVRSAATGVGVMNDRKSRFSVNGKPI A. thaliana

125 YHFMGTSTFSQYTVVHDVSVAKI DPVAPLEKVCLLGCGVPTGLGAVWNTAKVESGSI VAVFGLGTVGLAV N. attenuata
141 YHFMGTSTFSQYTVVHDVSVAKI DPVAPLEKVCLLGCGVPTGLGAVWNTAKVEPGSI VAVFGLGTVGLAV S. lycopersicum
141 YHFMGTSTFSQYTVVHDVSVAKI DPVAPLEKVCLLGCGVPTGLGAVWNTAKVEPGSNVAIFGLGTVGLAV A. thaliana

195 AEGAKAAGASRI IGI DI DSKKFDRAKNFGVTEFI NPKEHEKPI QQVI VDLTDGGVDYSFECI GNV SVMRA N. attenuata
211 AEGAKAAGASRI IGI DI DSKKFDRAKNFGVTEFI NPKEHEQPI QQVI VDLTDGGVDYSFECI GNV SVMRS S. lycopersicum
211 AEGAKTAGASRI IGI DI DSKKYETAKKFGVNEFVNPKDHDKPI QEVI VDLTDGGVDYSFECI GNV SVMRA A. thaliana

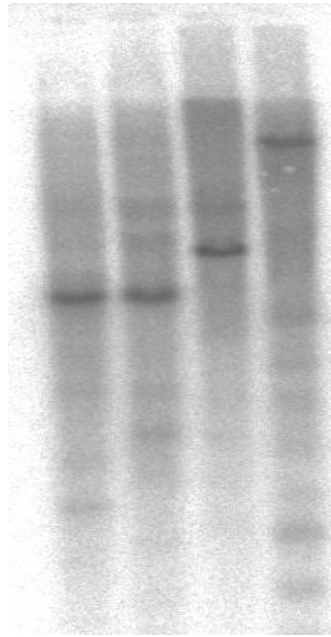
265 AL ECCHKGWGTSVI VGVAASGQEI STRPFQLVTGRVWKGTAFFGGFKRSRQVPWL VDKY N. attenuata
281 AL ECCHKGWGTSVI VGVAASGQEI STRPFQLVTGRVWKGTAFFGGFKRSRQVPSLVDKYLKKEI KVDEYI T S. lycopersicum
281 AL ECCHKGWGTSVI VGVAASGQEI STRPFQLVTGRVWKGTAFFGGFKSRITQVPWLVEKYMNKEI KVDEYI T A. thaliana

322
351 HNM TLADI NKAFDLVHDGDC LRVVLD MFV
351 HNL TLGEI NKAFDLVHEGTCLRCVLD TSK

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**Fig. S1.** Alignment of protein sequences of GSNOR in *Nicotiana attenuata*, *Solanum lycopersicum*, and *Arabidopsis thaliana*.

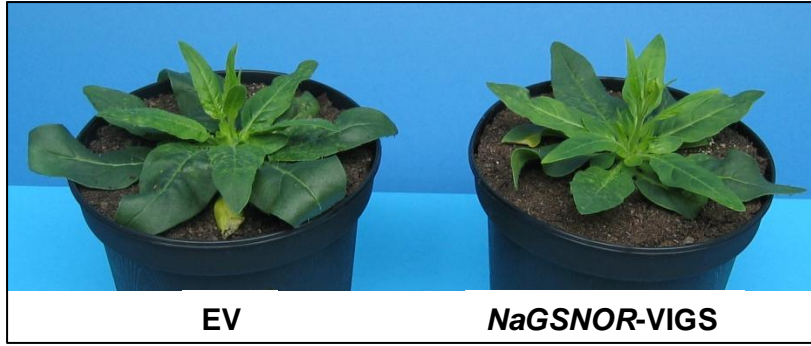
Arabidopsis AtGSNOR1 (NP\_199207) and *Solanum lycopersicum* SIGSNOR (ADB43258) were retrieved from GenBank. Protein sequences were aligned using the ClustalW algorithm. Shaded sequences indicate exact matches with the consensus sequence.



EcoRI HindIII EcoRV XbaI

**Fig. S2.** Southern blotting analysis of *NaGSNOR* in *N. attenuata*.

*N. attenuata* genomic DNA was digested with various restriction enzymes. Following the separation on a 1% agarose gel, the DNA was blotted onto a nylon membrane and hybridized with a radio-labeled partial *NaGSNOR* cDNA probe.



**Fig. S3.** Morphology of EV and *NaGSNOR*-VIGS plants.

**Supplementary Table S1** Primer pairs used for qRT-PCR

Genes	Forward Primer	Reverse Primer
<i>NaGSNOR</i>	5'-CCTCTGGTGATCGAGGATGT	5'-TCTCCTGGCTGAACCTCAGT
<i>NaTPI</i>	5'-TCAGGAGATAGTAAATATGGCTGTTCA	5'-ATCTGCATGTTCCACATTGCTTA
<i>NaJAZ3</i>	5'-CAATCGCGAGACGAGCTTCA	5'-CTCAGCTTTCCTGGAAATTGAG
<i>NaTD</i>	5'-TAAGGCATTTGATGGGAGGC	5'-TCTCCCTGTTACGATAATGGAA
<i>Actin</i>	5'-GGTCGTACCACCGGTATTGTG	5'-GTCAAGACGGAGAATGGCATG