

**Table S1***Oligonucleotide sequences used for the semi-quantitative RT-PCR in this study*

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Direction	Primer sequence (5'→3')
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**Primers used for semi-quantitative RT-PCR****For *NtACT9***

Forward CTATTCTCCGCTTTGGACTTGGCA

Reverse AGGACCTCAGGACAACGGAAACG

**For *RpBAS***

Forward CATATGGCTACTGAAGAGATGAAG

Reverse TGAGTCTCAGATGGTCCCCTGAA

**For *RiRZS1***

Forward AATAATCGGTTATGGAGTGGCTAGA

Reverse TCCTTAGAGCAGCATCCAGGTCA

**For *AtPAP1***

Forward AACTCTAGAATGGAGGGTTCGTCCAAAGG

Reverse TTCCGAGCTCCTAATCAAATTCACAGTCTCT

**Primers used for quantitative RT-PCR****For *NtEF1α***

Forward CCACACCTCCCACATTGCTGTCA

Reverse CGCATGTCCCTCACAGCAAAAC

**For *RpBAS***

Forward GGGTGCTAGGGTGTGATT

Reverse CAGCACCATCTCCAAGGATAG

**For *RiRZS1***

Forward CACTGATGTGCCTCTCTTAC

Reverse GCCAACAAGCTGACCTACT

**Primers used for full-length *RiRZS1* and *RpBAS* cloning****For *RpBAS***

Forward CATATGGCTACTGAAGAGATGAAG

Reverse TCAAGAGATCACTGGCACAG

**For *RiRZS1***

Forward GCGCGGCAGCCATATGGCGAGTGGTGGAGAAATG

Reverse ACGGAGCTCGAATTCCTCGAGTCACTCTCTGAAACAACCAC

**Primers used for InFusion cloning****For binary vector constructs**

Forward TGCGGCCGCTGGATCGTCCCCAGATTAGCCTTTTC

Reverse CCATGATTACGAATTAATTCCTTATCTTTAATCATATTC

Table S2. Volatile benzenoids and those glycosides in leaves of transgenic tobacco.

Compound	Transgenic lines							
	SR1 (WT)		<i>RZS1-BAS</i> <i>-OX</i> (#6)		<i>PAP1</i> <i>-OX</i>		<i>RZS1-BAS</i> (#6) x <i>PAP1</i> <i>-OX</i>	
	aglycone	glycosides	aglycone	glycosides	aglycone	glycosides	aglycone	glycosides
Benzyl alcohol	n.d.	1.42 ± 0.15	n.d.	1.62 ± 0.20	0.65 ± 0.04	1.55 ± 0.54	1.02 ± 0.05	2.94 ± 0.24
2-Phenylethanol	n.d.	0.32 ± 0.07	n.d.	0.46 ± 0.07	n.d.	0.11 ± 0.03	0.45 ± 0.03	0.41 ± 0.05
Raspberry ketone	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	2.24 ± 0.18
Rhododenol	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	2.29 ± 0.18

( $\mu\text{g/gFW}$ )

Table S3. Volatile benzenoids and those glycosides in flowers of transgenic tobacco.

Compound	Transgenic lines							
	SR1 (WT)		<i>RZS1-BAS</i> <i>-OX</i> (#6)		<i>PAP1</i> <i>-OX</i>		<i>RZS1-BAS</i> (#6) x <i>PAP1</i> <i>-OX</i>	
	aglycone	glycosides	aglycone	glycosides	aglycone	glycosides	aglycone	glycosides
Benzyl alcohol	1.15 ± 0.07	4.56 ± 2.95	0.98 ± 0.04	0.50 ± 0.03	0.38 ± 0.01	0.15 ± 0.02	0.23 ± 0.02	0.23 ± 0.09
4-Hydroxybenzyl alcohol	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	0.12 ± 0.03	0.76 ± 0.17
Raspberry ketone	n.d.	n.d.	n.d.	2.38 ± 0.35	n.d.	n.d.	0.45 ± 0.04	4.46 ± 0.21
Rhododenol	n.d.	n.d.	n.d.	0.60 ± 0.09	n.d.	n.d.	n.d.	1.78 ± 0.04

(µg/gFW)