

**Figure S1.** The mean GSH/GSSG ratio in TuMV- and mock-inoculated Col-0, *rbohD*, *rbohF*, and *rbohD/F* plant leaves between 1 and 14 dpi. Using ANOVA and Tukey's HSD test, the mean GSH/GSSG ratio were calculated at  $p < 0.05$ . Statistically significant values are indicated by different letters above the bars.

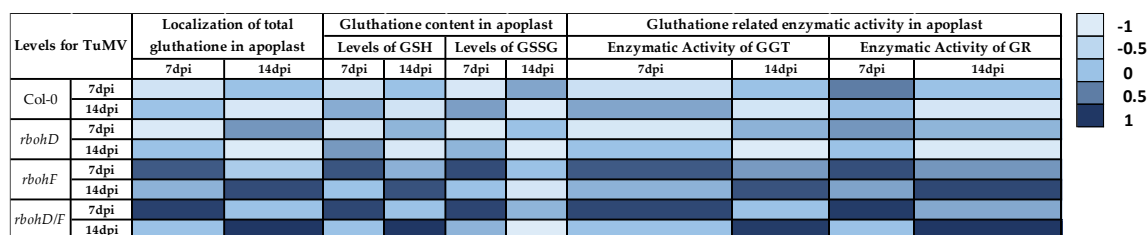
**Table S1.** Heatmap of PCC for cellular glutathione (localization and content), host genes expression (*AtGGT1*, *AtGSTU1*, *AtGSTU13*, *AtGSTU24*) and TuMV levels in virus-inoculated Col-0, *rbohD*, *rbohF* and *rbohD/F* plants from 7 to 14 dpi. PCC matrix values are presented pairwise for specific time dpi and marked with colors, from very dark green (PCC = 1) to bright green (PCC = -1).

Levels for TuMV	Localization of total glutathione in cell		Glutathione content in cell				Host Gene Expression												<div><div></div><div>-1</div></div> <div><div></div><div>-0.5</div></div> <div><div></div><div>0</div></div> <div><div></div><div>0.5</div></div> <div><div></div><div>1</div></div>
			Levels of GSH		Levels of GSSG		Normalized expression of <i>AtGGT1</i>		Normalized expression of <i>AtGSTU1</i>		Normalized expression of <i>AtGSTU13</i>		Normalized expression of <i>AtGSTU19</i>		Normalized expression of <i>AtGSTU24</i>				
	7dpi	14dpi	7dpi	14dpi	7dpi	14dpi	7dpi	14dpi	7dpi	14dpi	7dpi	14dpi	7dpi	14dpi	7dpi	14dpi			
Col-0	7dpi																		
	14dpi																		
<i>rbohD</i>	7dpi																		
	14dpi																		
<i>rbohF</i>	7dpi																		
	14dpi																		
<i>rbohD/F</i>	7dpi																		
	14dpi																		

**Table S2.** Heatmap of PCC for **cellular glutathione** related enzymatic activity (GGT,GR, GST and GPXL) and TuMV levels in virus-inoculated Col-0, *rbohD*, *rbohF* and *rbohD/F* plants from 7 to 14 dpi. PCC matrix values are presented pairwise for specific time dpi and marked with colors, from very dark green (PCC = 1) to bright green (PCC = -1).

Levels for TuMV		Glutathione related enzymatic activity in cell							
		Enzymatic Activity of GGT		Enzymatic Activity of GR		Enzymatic Activity of GST		Enzymatic Activity of GPXL	
		7dpi	14dpi	7dpi	14dpi	7dpi	14dpi	7dpi	14dpi
Col-0	7dpi								
	14dpi								
<i>rbohD</i>	7dpi								
	14dpi								
<i>rbohF</i>	7dpi								
	14dpi								
<i>rbohD/F</i>	7dpi								
	14dpi								

**Table S3.** Heatmap of PCC for **apoplast total glutathione** localization, apoplast GSH and GSSG content, glutathione related enzymatic activity in apoplast and TuMV levels in virus-inoculated Col-0, *rbohD*, *rbohF* and *rbohD/F* plants from 7 to 14 dpi. PCC matrix values are presented pairwise for specific time dpi and marked with colors, from very dark blue (PCC = 1) to bright blue (PCC = -1).



**Table S4.** Determination of the contamination of the apoplastic extracts (apoplastic washing fluid, AWF) based of total leaf G6PDH activity (in U) and % of activity G6PDH in apoplast. Non -significant cytoplasmatic contamination values are bolded.

G6PDH activity in the total leaf and in the apoplast (%) of tissue from mock and virus inoculated Arabidopsis plants (presented as means  $\pm$  se)

Combination	Time			
	1dpi	3dpi	7dpi	14 dpi
mock-inoculated Col-0	15.020 $\pm$ 0.04	17.000 $\pm$ 0.02	15.201 $\pm$ 0.03	14.500 $\pm$ 0.01
% per cent activity in apoplast	<b>0.09</b>	<b>0.11</b>	<b>0.08</b>	<b>0.08</b>
mock-inoculated <i>rbohD</i>	17.2310 $\pm$ 0.03	18.570 $\pm$ 0.01	17.202 $\pm$ 0.04	15.290 $\pm$ 0.01
% per cent activity in apoplast	<b>0.08</b>	<b>0.075</b>	<b>0.071</b>	<b>0.07</b>
mock-inoculated <i>rbohF</i>	17.600 $\pm$ 0.01	18.890 $\pm$ 0.03	17.312 $\pm$ 0.01	15.450 $\pm$ 0.02
% per cent activity in apoplast	<b>0.1</b>	<b>0.11</b>	<b>0.09</b>	<b>0.1</b>
mock-inoculated <i>rbohD/F</i>	13.000 $\pm$ 0.04	16.022 $\pm$ 0.02	14.000 $\pm$ 0.04	14.133 $\pm$ 0.01
% per cent activity in apoplast	<b>0.05</b>	<b>0.05</b>	<b>0.07</b>	<b>0.07</b>
virus-inoculated Col-0	22.400 $\pm$ 0.03	25.802 $\pm$ 0.04	26.011 $\pm$ 0.01	27.000 $\pm$ 0.03
% per cent activity in apoplast	<b>0.2</b>	<b>0.2</b>	<b>0.23</b>	<b>0.23</b>
virus-inoculated <i>rbohD</i>	18.000 $\pm$ 0.04	18.520 $\pm$ 0.04	21.000 $\pm$ 0.03	19.202 $\pm$ 0.01
% per cent activity in apoplast	<b>0.11</b>	<b>0.11</b>	<b>0.19</b>	<b>0.16</b>
virus-inoculated <i>rbohF</i>	23.200 $\pm$ 0.04	24.000 $\pm$ 0.01	24.32	25.020 $\pm$ 0.02
% per cent activity in apoplast	<b>0.18</b>	<b>0.2</b>	<b>0.22</b>	<b>0.23</b>
virus-inoculated <i>rbohD/F</i>	16.000 $\pm$ 0.01	16.500 $\pm$ 0.02	17.200 $\pm$ 0.04	18.200 $\pm$ 0.03
% per cent activity in apoplast	<b>0.1</b>	<b>0.11</b>	<b>0.13</b>	<b>0.16</b>

**Table S5.** Primer sequences for RT-qPCR analyses.

Genes	Forward Primer	Reverse Primer	Concentration in reaction (μM)
<i>Investigated</i>			
<i>TuMV-CP</i>	5'- CCGGAATTCATGRTIT GGTGYATIGAIAAYGG -3'	5'- CGCGGATCCGCIGYYTTCATY TGIRIIWKIGC-3'	0.5
<i>AtGGT1</i>	5'- CGGGGGCATGTGGAA TCAGATC-3'	5'- CTCTGTTTGGTATCAGCTGAT GGTAG-3	0.5
<i>AtGSTU1</i>	5'- GCAGTGAGGGGATGT ATTC-3'	5'- TTTCGTAGGCAAGAAGTATC T-3'	0.5
<i>AtGSTU13</i>	5'- CGCAAAGCAAAAGTT CAATGT-3'	5'- TGGCACAAAACACAGACAA AT-3'	0.5
<i>AtGSTU19</i>	5'- ATGATGCTCAGAGGA AGGTG-3'	5'- ATAGCCAAAGTCATCGCCAC -3'	0,5
<i>AtGSTU24</i>	5'- AAGGTGAGGAGCAA GAAGCA-3'	5'- ACATACCCAAAAGTTTCGTC TC-3'	0.5
<i>Reference</i>			
<i>AtEF1a</i>	5'- CACCCTGGAGGTTT TGAGG -3'	3'- TGGAGTATTTGGGGGTGGT - 5'	0.5
<i>AtF-Box</i>	5'- GCTTGCACACGCCAT ATCAAT-3'	3'- TGGATTTTACCACCTTCCGCA -5'	0.5

**Table S6.** Conditions of the RT-qPCR for the reference genes (\*).

Program	Parameters
Preliminary denaturation	95 °C for 5 min
Amplification (35 cycles)	95 °C for 10 s 58 °C for 10 s 72 °C for 20 s *
Melting curve	65–95 °C; 0.1 °C/s

\* Fluorescence signal reading was taken at the final stage