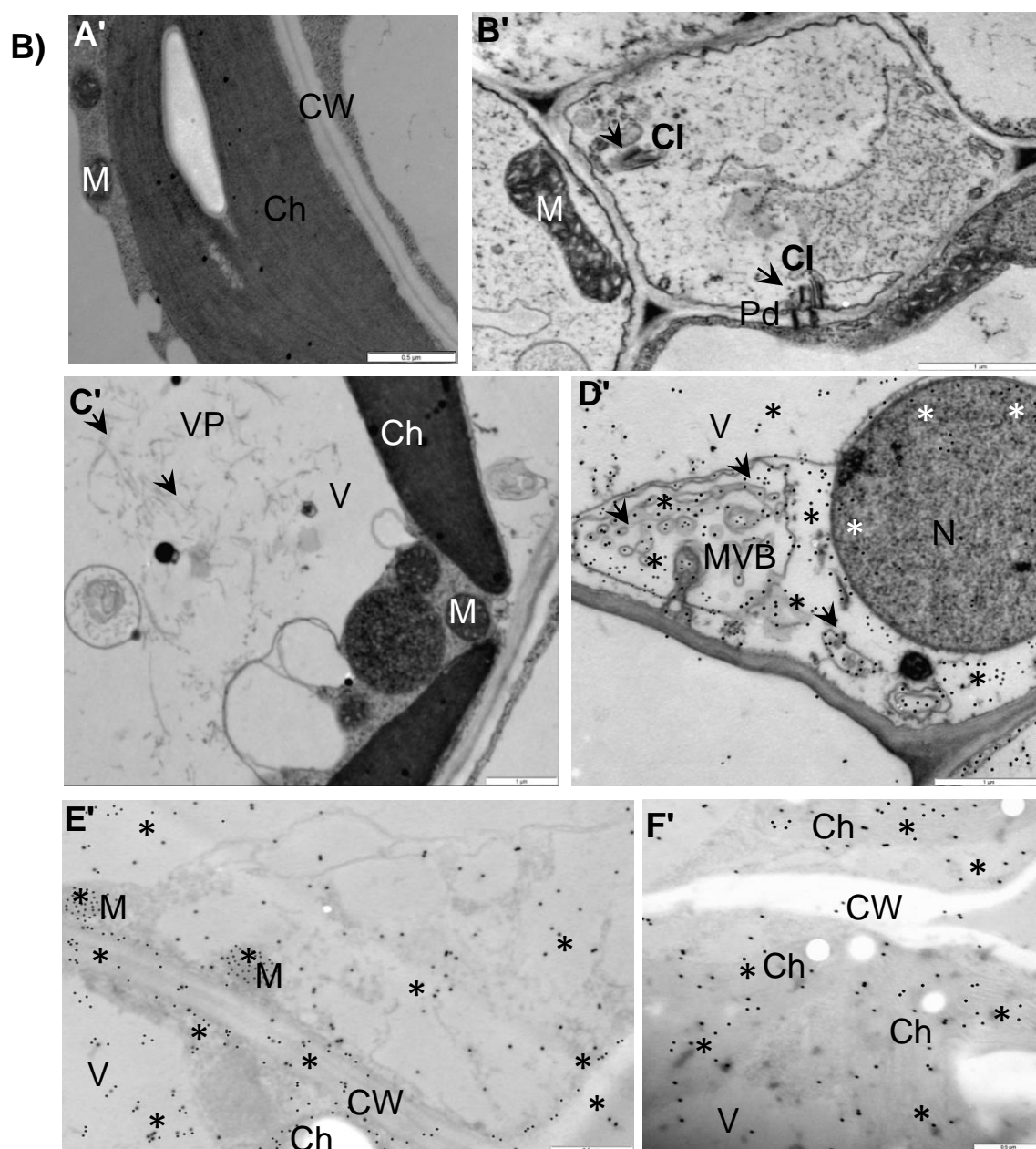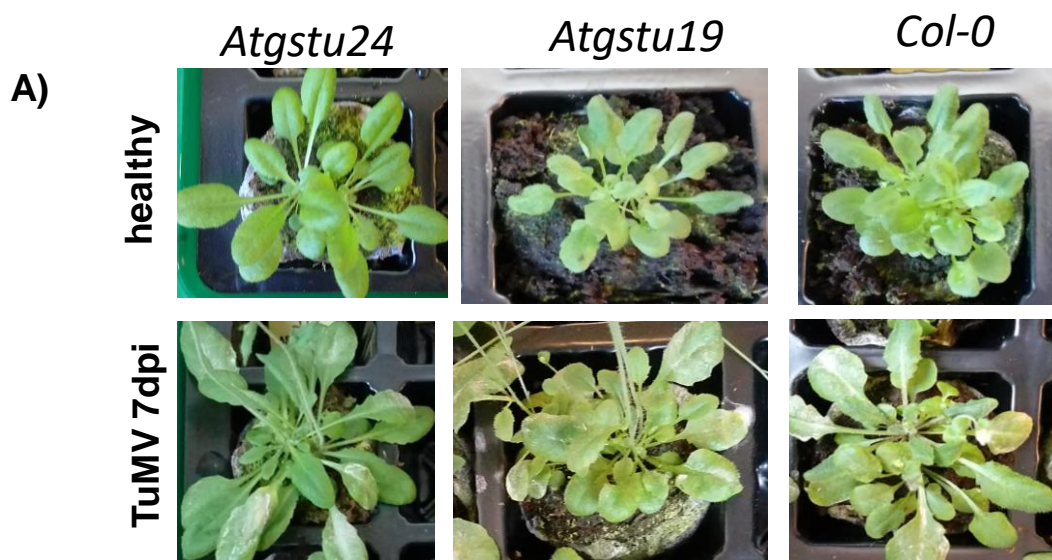**Table S1. TuMV detection assessment using DAS-ELISA** on *Arabidopsis thaliana* wild type and mutant leaves at 3 and 7 dpi. Values presented are mean optical density (OD_{405nm}) values. Absence of virus is marked by (-). Presence of TuMV (+) is confirmed in samples with mean OD_{405nm} above estimated cut off point: 0.1412.

Sample	Mean OD_{450nm}	Presence (+)/absence of the virus (-)
buffer	0.0001	-
mock-inoculated Col-0 (3dpi)	0.0305	-
mock-inoculated *Atgstu19* (3dpi)	0.0213	-
mock-inoculated *Atgstu24* (3dpi)	0.0200	-
TuMV-inoculated Col-0 (3dpi)	0.8820	+
TuMV-inoculated *Atgstu19* (3dpi)	0.7519	+
TuMV-inoculated *Atgstu 24* (3dpi)	0.5200	+
mock-inoculated Col-0 (7dpi)	0.0501	-
mock-inoculated *Atgstu19* (7dpi)	0.0521	-
mock-inoculated *Atgstu 24* (7dpi)	0.0402	-
TuMV-inoculated Col-0 (7dpi)	1.425	+
TuMV-inoculated *Atgstu19* (7dpi)	3.321	+
TuMV-inoculated *Atgstu24* (7dpi)	0.693	+
mock-inoculated Col-0 (14dpi)	0.0600	-
mock-inoculated *Atgstu19* (14dpi)	0.0632	-
mock-inoculated *Atgstu 24* (14dpi)	0.0606	-
TuMV-inoculated Col-0 (14dpi)	1.939	+
TuMV-inoculated *Atgstu19* (14dpi)	4.026	+
TuMV-inoculated *Atgstu24* (14dpi)	0.299	+

A)

Atgstu24   *Atgstu19*   *Col-0*

healthy

TuMV 7dpi

B)

A'
CW
M
Ch

B'
Cl
M
Cl
Pd

C'
VP
Ch
V
M

D'
V
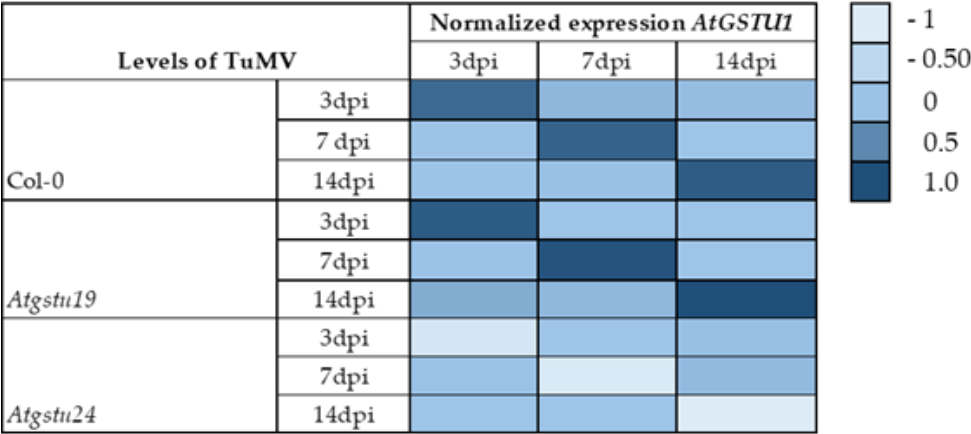MVB
N

E'
M
M
V
CW
Ch

F'
Ch
CW
Ch
Ch
V

Supplementary Figure S1
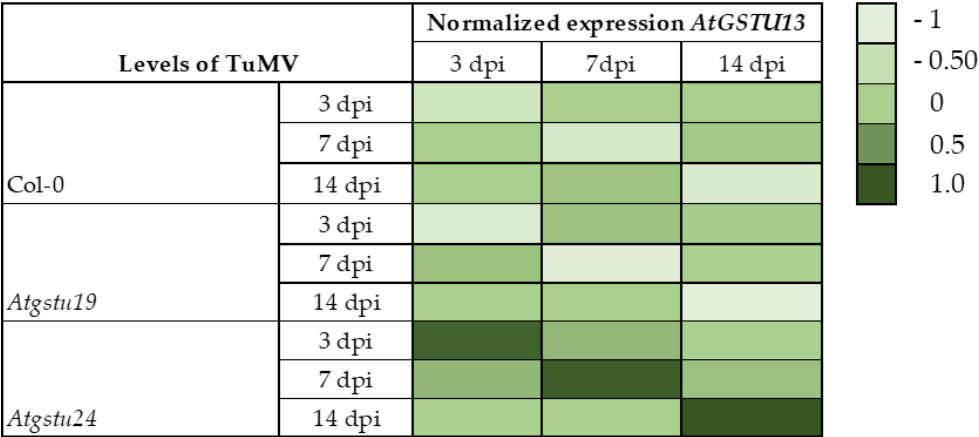
Supplementary Figure S1

Panel A) - *Arabidopsis thaliana Atgstu24*, *Atgstu19* knockout mutant plants and Col-0 wild type plants: healthy plants, and 7 dpi afer TuMV inoculation;

Panel B) – Ultrastructural changes in Col-0 wild type inoculated leaves: **(A')** Unchanged mesophyll cel from Col-0 mock-inoculated leaf. CW-cel wall, Ch-chloroplast, M-mitochondria. Scale bar 0.5μm; **(B')** TuMV cytoplasmic inclusions (CI, arrows) in phloem parenchyma cells 7 days after TuMV inoculation. M-mitochondria, Pd-plasmodesmata. Scale bar 1μm. **(C')** Virus particles (VP, arrows) in vacuole (V) of mesophyll cell. Ch-chloroplast, M-mitochondria. Scale bar 1μm. **(D')** Gold particles indicating TuMV (*) in multivesicular bodies (MVB, arrows) and in nucleus (N) in mesophyll cell 7 dpi after TuMV inoculation. Scale bar 1μm. **(E')** Gold granules indicating GSH (*) deposition along cell wall (CW), in mitochondria (M) and chloroplasts (Ch) in phloem Col-0 7dpi TuMV-inoculated leaf. Scale bar 0.5 μm. **(F')** GSH (*) deposition in changed chloroplasts (Ch) in Col-0 mesophyll cell 14 days after TuMV inoculation. Scale bar 0.5 μm.
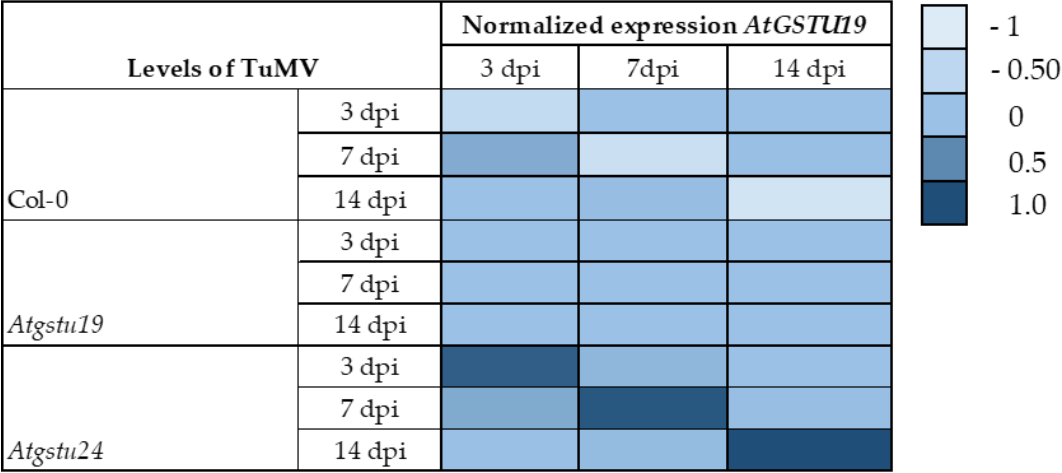
Table S2. Heatmap of PCC *for AtGSTU1 normalized expression (based on AtEf1α and AtF-Box) and TuMV levels in* virus-inoculated **Col-0**, *Atgstu19* and *Atgstu24* **plants from 3 to 14 dpi.** *PCC matrix values are presented pairwise for* specific cell compartments in specific time dpi and marked with *colors, from very dark blue (PCC = 1) to bright blue (PCC = -1).*

Levels of TuMV		Normalized expression AtGSTU1		
		3dpi	7dpi	14dpi
Col-0	3dpi			
	7 dpi			
	14dpi			
Atgstu19	3dpi			
	7dpi			
	14dpi			
Atgstu24	3dpi			
	7dpi			
	14dpi			

Legend: -1, -0.50, 0, 0.5, 1.0

Table S3. Heatmap of PCC *for AtGSTU13 normalized expression (based on AtEf1α and AtF-Box) and TuMV levels in* virus-inoculated **Col-0**, *Atgstu19* and *Atgstu24* **plants from 3 to 14 dpi.** *PCC matrix values are presented pairwise for* specific cell compartments in specific time dpi and marked with *colors, from very dark blue (PCC = 1) to bright blue (PCC = -1).*

Levels of TuMV		Normalized expression AtGSTU13		
		3 dpi	7dpi	14 dpi
Col-0	3 dpi			
	7 dpi			
	14 dpi			
Atgstu19	3 dpi			
	7 dpi			
	14 dpi			
Atgstu24	3 dpi			
	7 dpi			
	14 dpi			

Legend: -1, -0.50, 0, 0.5, 1.0

Table S4. Heatmap of PCC *for AtGSTU19 normalized expression (based on AtEf1α and AtF-Box) and TuMV levels in* virus-inoculated **Col-0**, *Atgstu19* and *Atgstu24* **plants from 3 to 14 dpi.** *PCC matrix values are presented pairwise for* specific cell compartments in specific time dpi and marked with *colors, from very dark blue (PCC = 1) to bright blue (PCC = -1).*
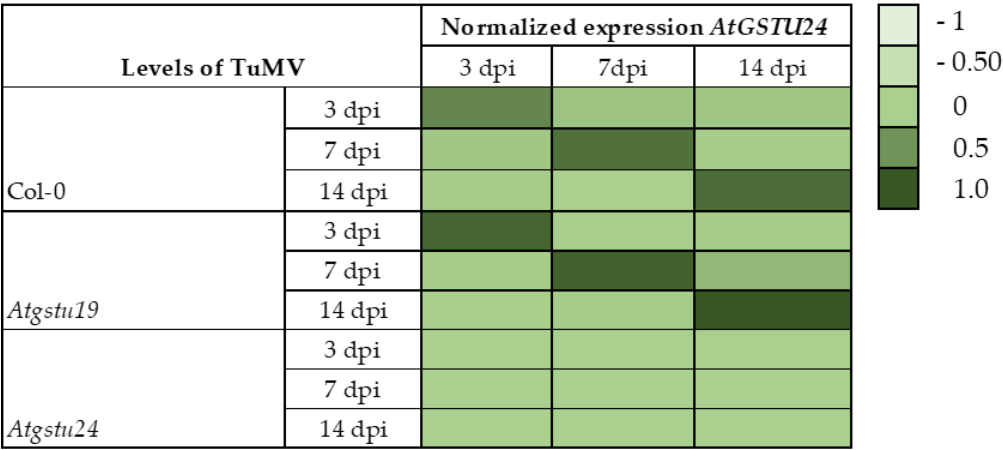
Levels of TuMV		Normalized expression *AtGSTU19*		
		3 dpi	7dpi	14 dpi
Col-0	3 dpi			
	7 dpi			
	14 dpi			
Atgstu19	3 dpi			
	7 dpi			
	14 dpi			
Atgstu24	3 dpi			
	7 dpi			
	14 dpi			

- 1
- 0.50
0
0.5
1.0

Table S5. Heatmap of PCC *for AtGSTU24 normalized expression (based on AtEf1α and AtF-Box) and TuMV levels in* virus-inoculated **Col-0**, *Atgstu19* and *Atgstu24* **plants from 3 to 14 dpi.** *PCC matrix values are presented pairwise for* specific cell compartments in specific time dpi and marked with *colors, from very dark blue (PCC = 1) to bright blue (PCC = -1).*

Levels of TuMV		Normalized expression *AtGSTU24*		
		3 dpi	7dpi	14 dpi
Col-0	3 dpi			
	7 dpi			
	14 dpi			
Atgstu19	3 dpi			
	7 dpi			
	14 dpi			
Atgstu24	3 dpi			
	7 dpi			
	14 dpi			

- 1
- 0.50
0
0.5
1.0

Table S6. Primer sequences for RT-qPCR analyses

Genes	Forward Primer	Reverse Primer	Concentration in Reaction (µM)
Invastigated			
TuMV-CP	5'-CCGGAATTC ATGRTITGGT GYATIGAIAA YGG-3'	5'-CGCGGATCCGCIG YYTTCATYTGIRIIW KIGC-3'	0.5
AtGSTU1	5'-GCAGTGAGG GGATGTATTC -3'	5'-TTTCGTAGGCAAG AAGTATCT-3'	0.5
AtGSTU13	5'-CGCAAAGCA AAAGTTCAA TGT-3'	5'-TGGCACAAAACA CAGACAAAT-3'	0.5
AtGSTU19	5'-ATGATGCTC AGAGGAAGG TG-3'	5'-ATAGCCAAAGTC ATCGCCAC-3'	0,5
AtGSTU24	5'-AAGGTGAGG AGCAAGAAG CA-3'	5'-ACATACCCAAAA GTTTCGTCTC-3'	0.5
Reference			
AtEF1a	5'-CACCACTGG AGGTTTTGAG G -3'	3'-TGGAGTATTTGGG GGTGGT -5'	0.5
AtF-Box	5'-GCTTGCACA CGCCATATC AAT-3'	3'-TGGATTTTACCAC CTTCCGCA-5'	0.5

Table S7. 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