Legends for Supplementary Material

Figure S1. Transcript levels of *CYP710A* isogenes in Arabidopsis leaves upon challenge with different strains of *Pseudomonas syringae* pv. *tomato* (*Pst*) or *Pseudomonas syringae* pv. *phaseolicola* (*Psp*) according to publicly available microarray analyses (TAIR-ME00331: Response to virulent, avirulent, type III secretion system deficient and nonhost bacteria). Means (± SD) of Affymetrix transcript values originating from three replicates are shown. The data were normalized according to the Affymetrix MAS 5.0 Scaling Protocol.
(a) *CYP710A1* (gene ID At2g34500, probe ID 266995_at)
(b) *CYP710A2* (gene ID At2g34490, probe ID 266966_at)
(c) mixed *CYP710A3/CYP710A4* probe (gene IDs At2g28850/60, probe ID 266218_s_at)

Figure S2. Diaminobenzidine (DAB) staining to assess the oxidative burst in Arabidopsis leaves upon *Psm* (±*avrRpm1*) inoculation at 4 hpi. Control leaves were infiltrated with 10 mM $MgCl_2$. A dark-brown pigmentation indicates H_2O_2 production. Staining patterns of representative leaves are shown (scale bar = 1 mm).
(a) Col-0, *rbohD*, and *rbohF* plants inoculated with avirulent *Psm avrRpm1*.
(b) Col-0 plants inoculated with virulent *Psm*.

Figure S3. Assessment of the oxidative burst and microscopic HR lesions in Col-0 and *cyp710A1-1* leaves after *Psm avrRpm1* inoculation. Control leaves were infiltrated with 10 mM $MgCl_2$.
(a) DAB staining to assess the oxidative burst in leaves at 4 hpi. A dark-brown pigmentation indicates H_2O_2 production. Staining patterns of representative leaves are shown (scale bar = 1 mm).
(b) Trypan blue staining to assess the HR in leaves at 24 hpi. A dark-blue pigmentation indicates microscopic cell death. Staining patterns of representative leaves are shown (scale bar = 1 mm).

Figure S4. Sterol biosynthesis pathway genes with elevated transcript levels in Arabidopsis leaves upon challenge with different strains of *Pseudomonas syringae*

pv. *tomato* (*Pst*), according to publicly available microarray analyses (TAIR-ME00331: Response to virulent, avirulent, type III secretion system deficient and nonhost bacteria). Means (± SD) of Affymetrix transcript level values originating from three replicates are shown. The data were normalized according to the Affymetrix MAS 5.0 Scaling Protocol.

(a) *SQUALENE EPOXIDASE5* (*SQE5*; gene ID At5g24150, probe ID 249774_at)

(b) *SQUALENE EPOXIDASE6* (*SQE6*; gene ID At5g24160, probe ID 249775_at)

(c) *LANOSTEROL SYNTHASE1* (*LAS1*; gene ID At3g45130, probe ID 252611_at)

Table S1. Sterol composition of $MgCl_2$- or *Psm avrRpm1* (OD 0.005)-infiltrated leaves from Col-0, *cyp710A1-1*, and *cyp710A1-2* plants at day 2 post treatment, as identified by gas chromatography/mass spectrometry of trimethylsilyl derivatives. The sum of identified sterols (total sterols) is given in µg g^{-1} FW, the content of individual sterols is expressed as percentage (%) of total sterols. The column on the right depicts the stigmasterol / β-sitosterol ratios. Mean values from at least three leaf samples (± SD) consisting of six leaves and resulting from the same experiment are given. Relative retention times (RRT) with respect to the internal standard ergosterol, the mass/charge ratio (m/z) of ion chromatograms used for compound quantification (m/z), and the molecular ion (M^+) of the individual sterols (as trimethylsilyl derivatives) are also given. Another, biologically independent experiment yielded similar results.

[1]: 24-methyl-Δ^{22}-cholesterol: epimeric mixture of brassicasterol and crinosterol

[2]: 24-methyl-cholesterol: epimeric mixture of campesterol and 24-*epi*-campesterol

[3]: compound according to its mass spectrum identified as fucosterol-isomer; no further structural identification performed

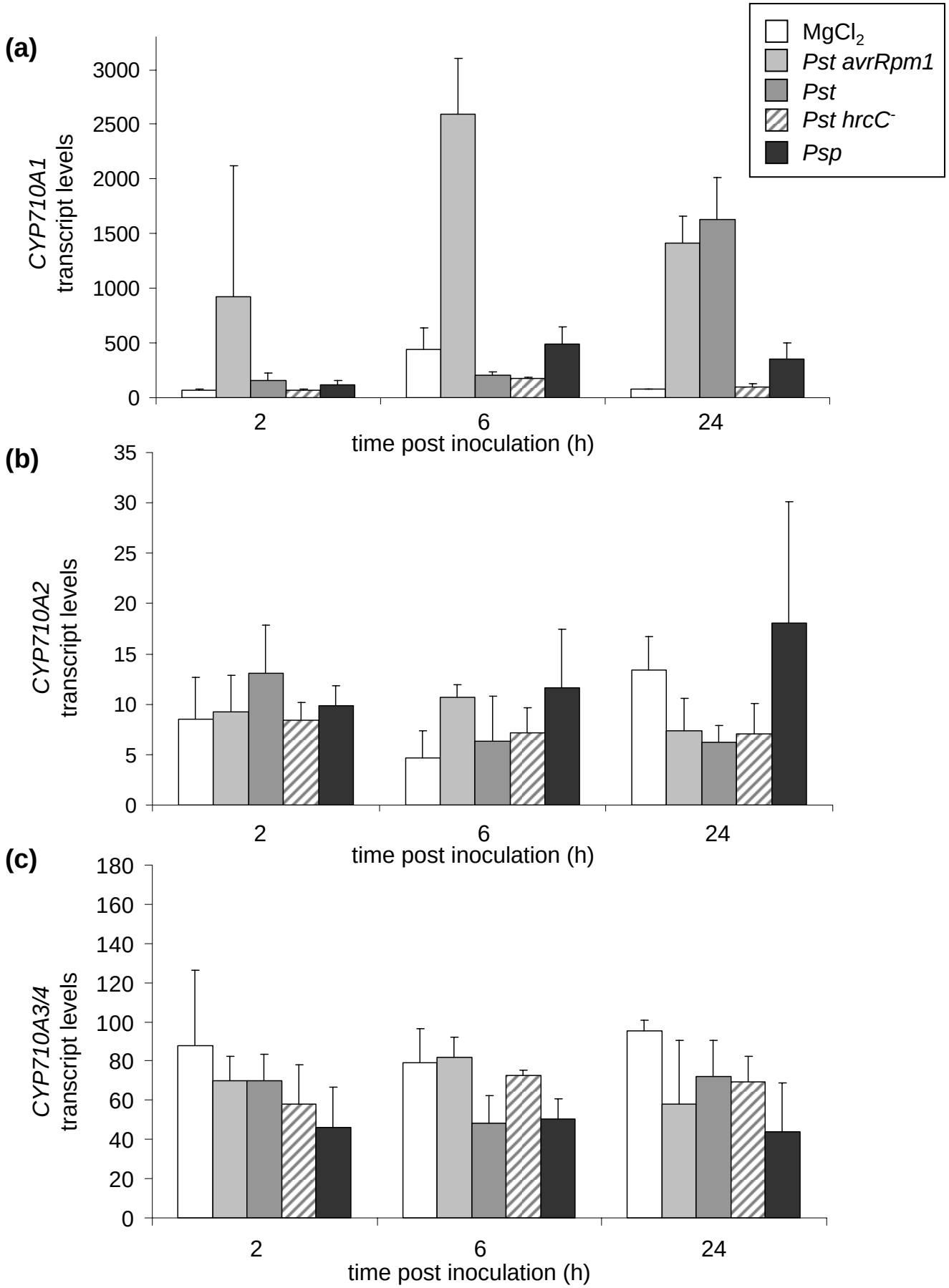
(a)
MgCl2
Pst avrRpm1
Pst
Pst hrcC-
Psp
CYP710A1 transcript levels
3000
2500
2000
1500
1000
500
0
2
6
24
time post inoculation (h)
(b)
CYP710A2 transcript levels
35
30
25
20
15
10
5
0
2
6
24
time post inoculation (h)
(c)
CYP710A3/4 transcript levels
180
160
140
120
100
80
60
40
20
0
2
6
24
time post inoculation (h)

Fig. S1

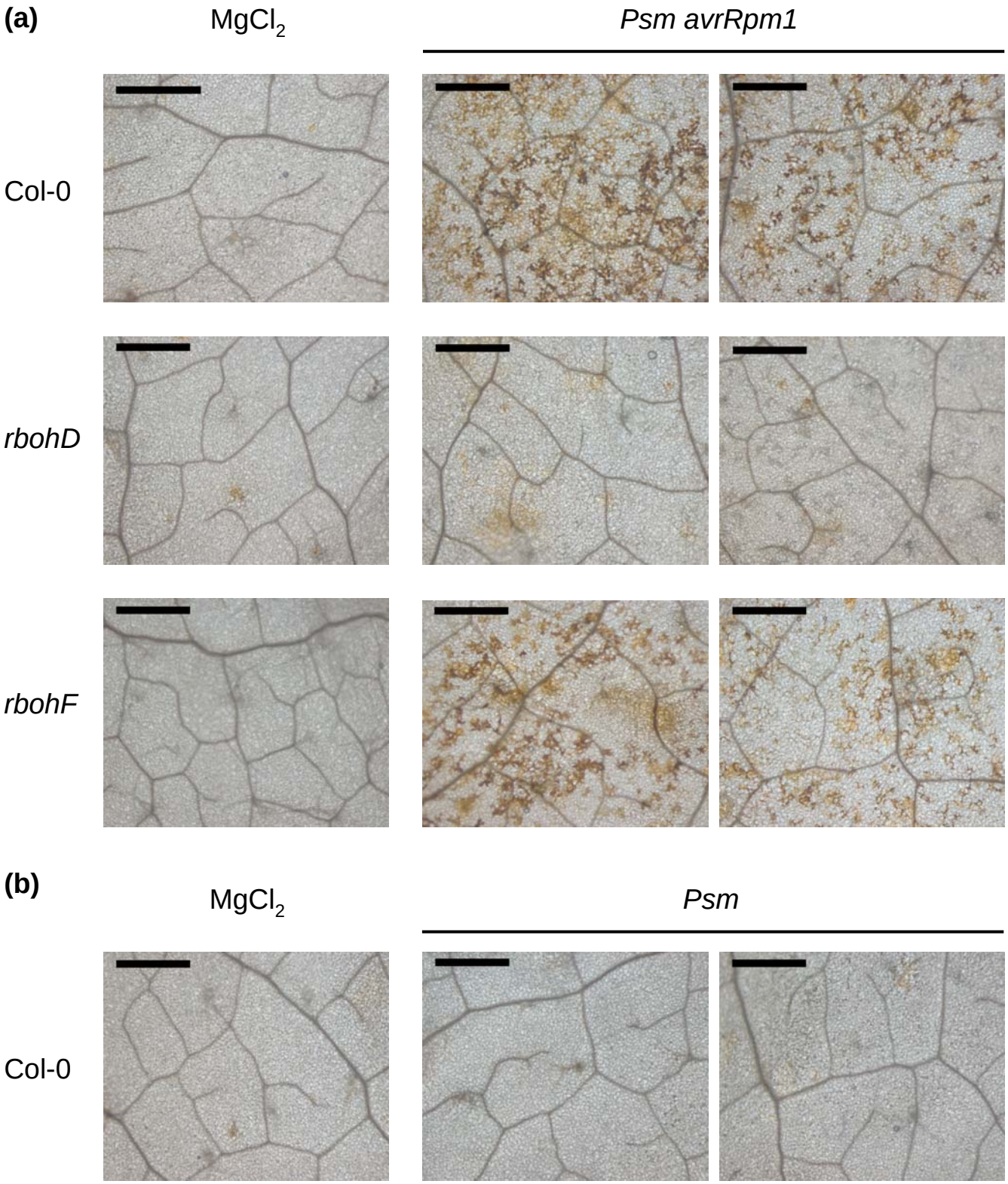

Fig. S2

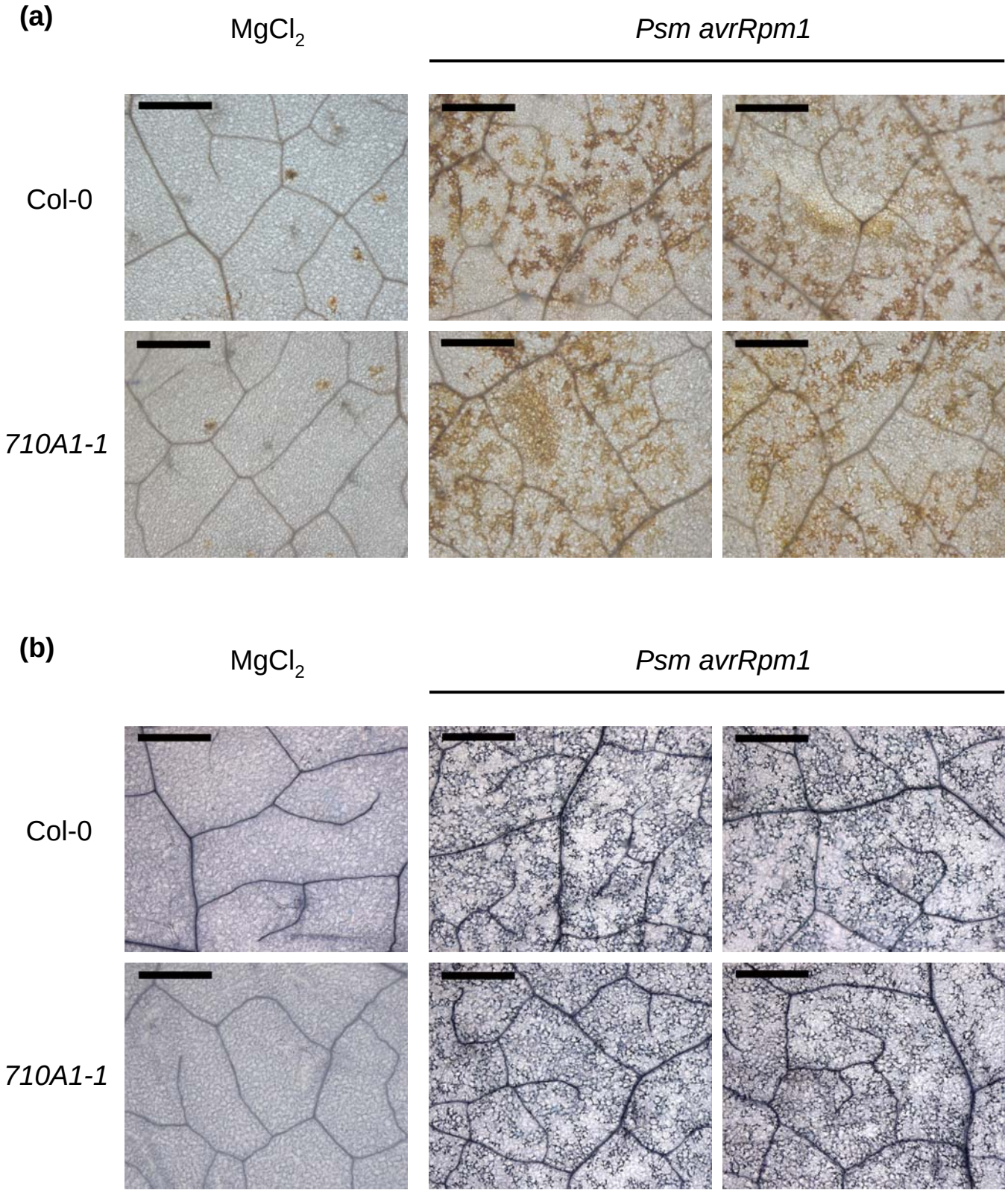
(a)
MgCl2
Psm avrRpm1
Col-0
710A1-1
(b)
MgCl2
Psm avrRpm1
Col-0
710A1-1

Fig. S3

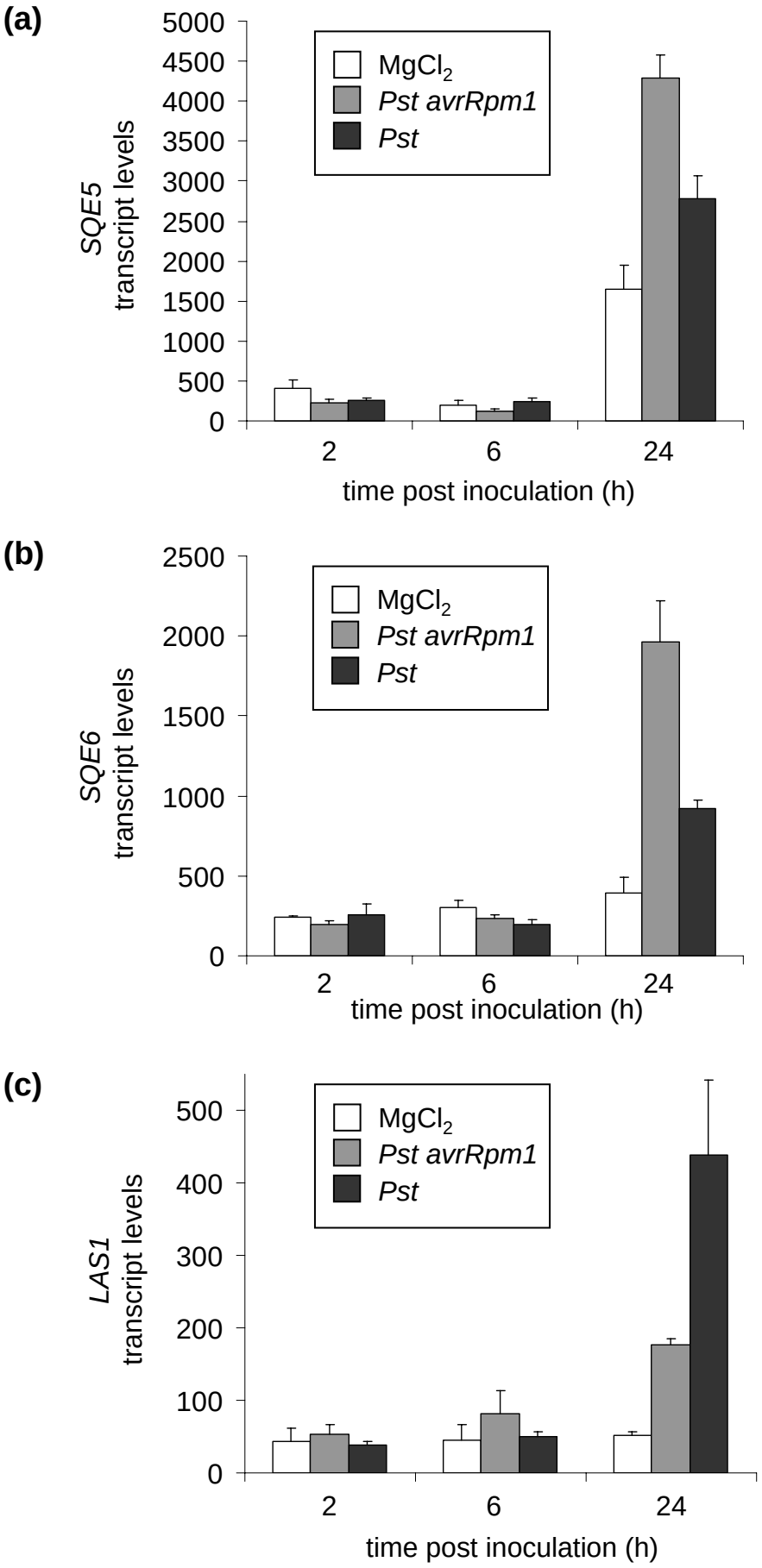
(a)
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
SQE5
transcript levels
MgCl2
Pst avrRpm1
Pst
2
6
24
time post inoculation (h)
(b)
2500
2000
1500
1000
500
0
SQE6
transcript levels
MgCl2
Pst avrRpm1
Pst
2
6
24
time post inoculation (h)
(c)
500
400
300
200
100
0
LAS1
transcript levels
MgCl2
Pst avrRpm1
Pst
2
6
24
time post inoculation (h)

Fig. S4

	stigma-sterol	β-sito-sterol	24-methyl-Δ^{22}-chole-sterol[1]	24-methyl-cholesterol[2]	chole-sterol	iso-fuco-sterol	fuco-sterol	fuco-sterol-isomer[3]	cyclo-artenol	total sterols	stigma- / β-sitosterol
RRT	1.02	1.04	0.99	1.01	0.97	1.05	1.06	1.07	1.06	-	-
m/z	394	396	380	382	329	386	386	386	393	-	-
M^+	484	486	470	472	458	484	484	484	498	-	-
	%	%	%	%	%	%	%	%	%	µg g^{-1} FW	ratio
Col-0 – $MgCl_2$	0.50 ±0.18	81.74 ±0.71	0.60 ±0.04	7.16 ±0.39	4.07 ±0.38	4.51 ±0.51	0.46 ±0.05	0.71 ±0.04	0.25 ±0.05	204.9 ±25.8	0.006 ±0.002
Col-0 – *Psm avrRpm1*	10.29 ±1.70	72.56 ±2.23	0.56 ±0.07	6.45 ±0.40	3.44 ±0.49	5.44 ±0.22	0.35 ±0.09	0.70 ±0.08	0.21 ±0.05	228.0 ±16.8	0.104 ±0.028
710A1-1 – $MgCl_2$	0.51 ±0.03	84.82 ±0.73	0.58 ±0.10	6.25 ±0.29	3.33 ±0.28	3.32 ±0.02	0.35 ±0.08	0.69 ±0.01	0.15 ±0.03	203.8 ±9.3	0.006 ±0.000
710A1-1 – *Psm avrRpm1*	0.86 ±0.09	82.52 ±0.68	0.55 ±0.07	6.53 ±0.29	3.18 ±0.36	5.09 ±0.22	0.37 ±0.06	0.63 ±0.01	0.26 ±0.05	214.3 ±12.4	0.010 ±0.001
710A1-2 – $MgCl_2$	0.35 ±0.07	80.61 ±0.57	0.59 ±0.01	6.70 ±0.11	4.05 ±0.30	6.12 ±0.03	0.50 ±0.01	0.79 ±0.10	0.29 ±0.05	200.9 ±19.6	0.004 ±0.001
710A1-2 – *Psm avrRpm1*	0.55 ±0.05	81.50 ±0.37	0.42 ±0.02	6.23 ±0.18	3.51 ±0.30	6.46 ±0.20	0.37 ±0.06	0.74 ±0.05	0.22 ±0.03	219.3 ±21.0	0.007 ±0.001

Tab. S1