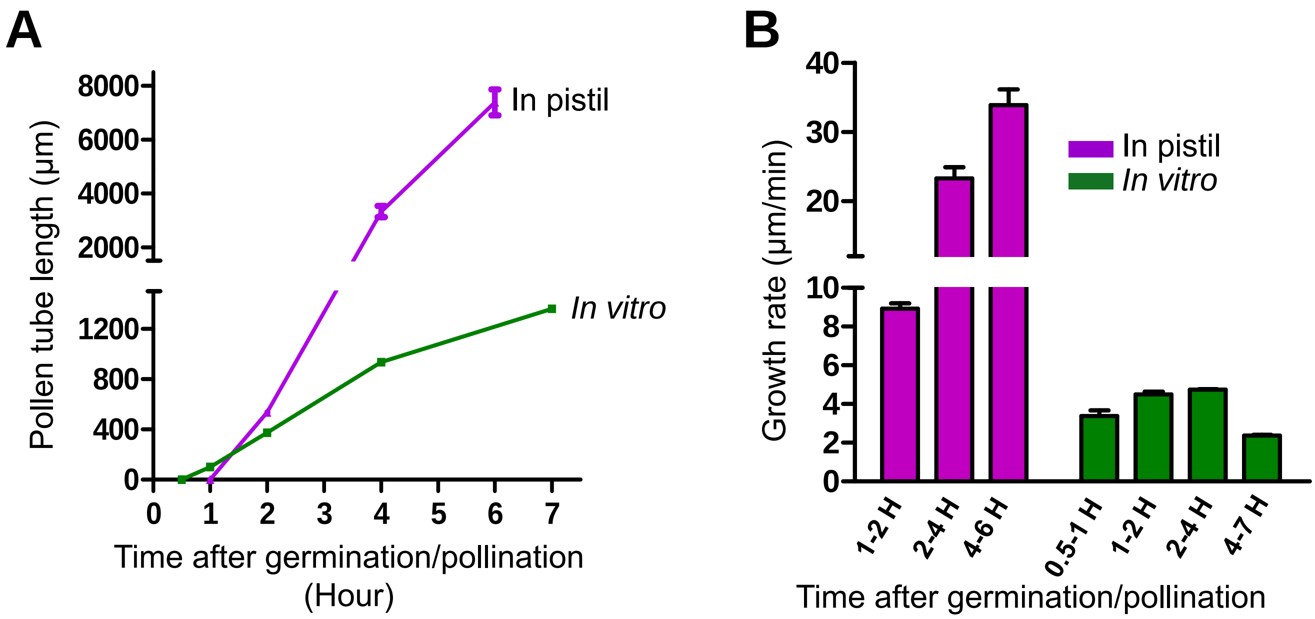
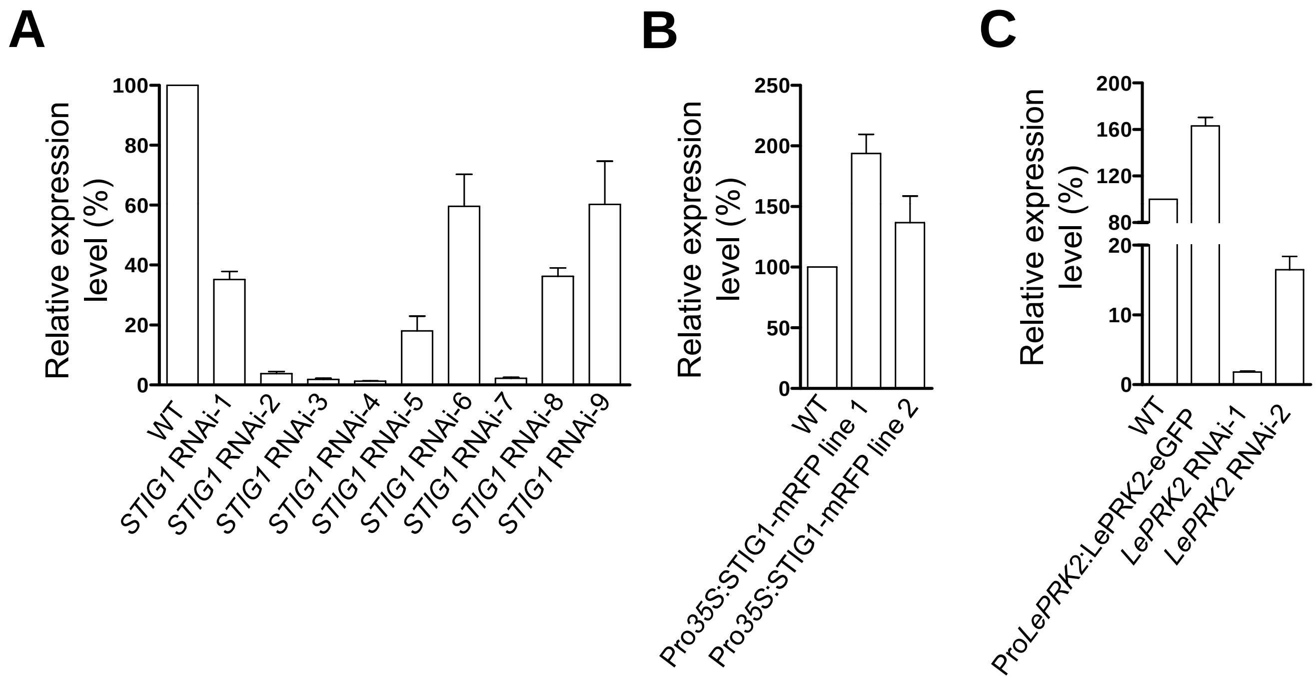


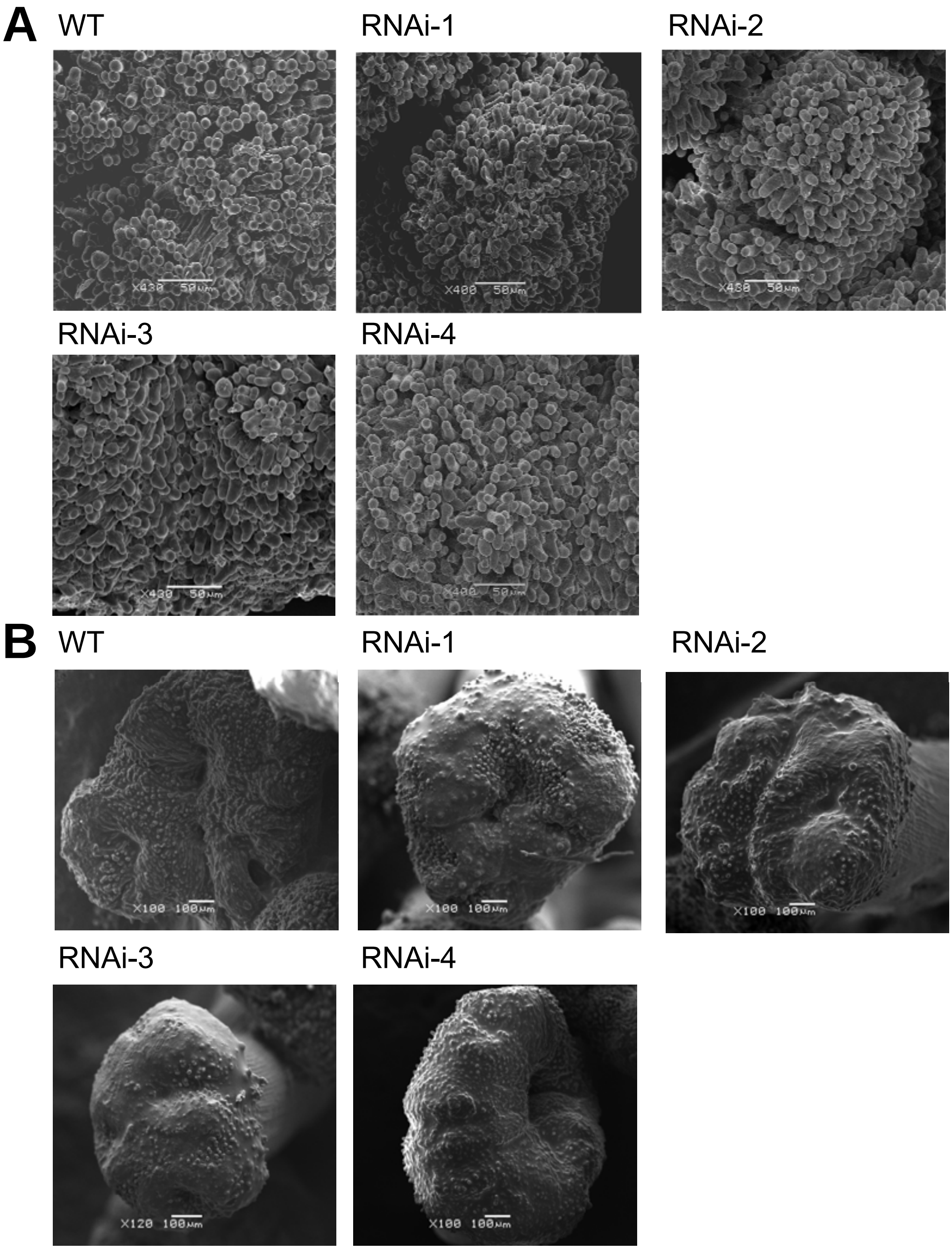
Supplemental Figure 1. Tomato pollen tube growth rate is faster in pistils than in optimized germination medium. A in vivo or in vitro pollen tube lengths at different time points. Pollen tubes begin to emerge at about 1 hour after pollination while it takes 30 minutes for pollen to germinate in germination medium. B. in vivo or in vitro pollen tube growth rate in (A). n = 3 independent experiments. At least 6 pistils were observed for each in vivo pollination experiment. More than 60 pollen tubes were measured for each time point of in vitro culture. Error bars indicate standard error.



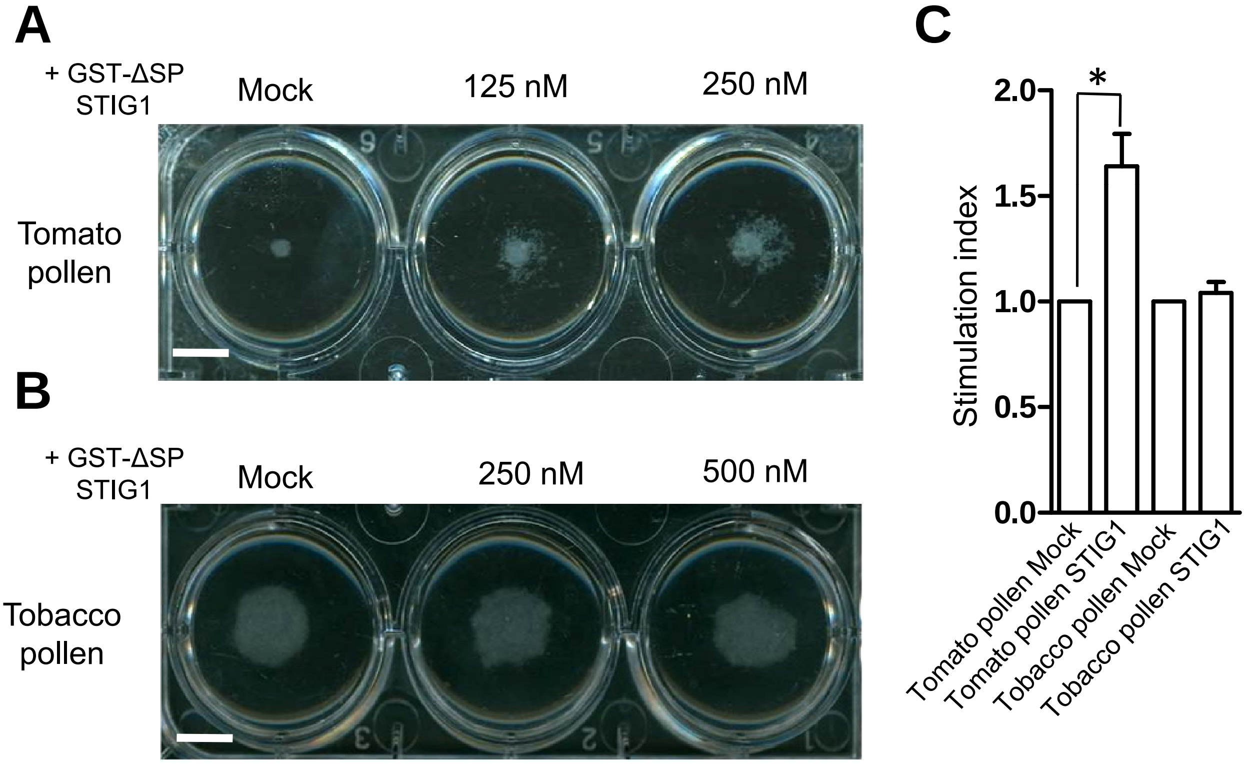
Supplemental Figure 2. Expression levels of target genes in transgenic tomato plants generated in this study. A and B. Quantitative reverse transcription-PCR of *STIG1* mRNA levels in nine *STIG1* RNAi lines (A) or two *STIG1* over-expressing lines (B), using total RNA of un-pollinated mature stigmas. C. Quantitative reverse transcription-PCR of *LePRK2* mRNA levels in one LePRK2 over-expressing line and two LePRK2 RNAi lines, using total RNA of mature pollen. n = 3 independent experiments. Error bars indicate standard error.

```
Sl-STIG1 1    MDFI-ILLIAILALSSTPITIISGSVTNHTYSTTNSYTNVALSARKVVFPPPRQLGK--DNSDDDDLICK 67
Nt-STIG1 1    MAFINLLILIILTLSSTPITTMSIPETNRRNATTNSYTDVALSARKGAFPPPRKLGEYSTNSTDYNLICK 70
Ph-STIG1 1    MAFI-NVLIIILTLSSTPISILSGPVTYNTNSTTNSSTNVAVSARKGADPPSKQPGG-------DNMICE 62
Consensus     * **  ::: **:******: :* . * .  :**** *:**:**** . **.:: *         ::**:

                   ↓
Sl-STIG1 68   TCKRLSEHRTCCFNYFCVDLFTNRFNCGSCGLVCIVGTRCCGGICVDIKKDNGNCGKCNNVCSPGQNCSF 137
Nt-STIG1 71   TCKRLSERNTCCFNYSCVDVSTNRFNCGSCGLVCNLGTRCCGGICVDIQKDNGNCGKCSNVCSPGQKCSF 140
Ph-STIG1 63   TCRALSEKLTCCFNASCVDLSSNRFNCGSCGIVCDLRTRCCGGLCVDITKDNGNCGNCGNACAPGQDCSF 132
Consensus     **: ***: *****  ***: :*********:** : ******:**** *******:*.*.*:***.***

Sl-STIG1 138 GLCVSA 143
Nt-STIG1 141 GFCDYA 146
Ph-STIG1 133 GLCGYA 138
Consensus     *:*  *
```

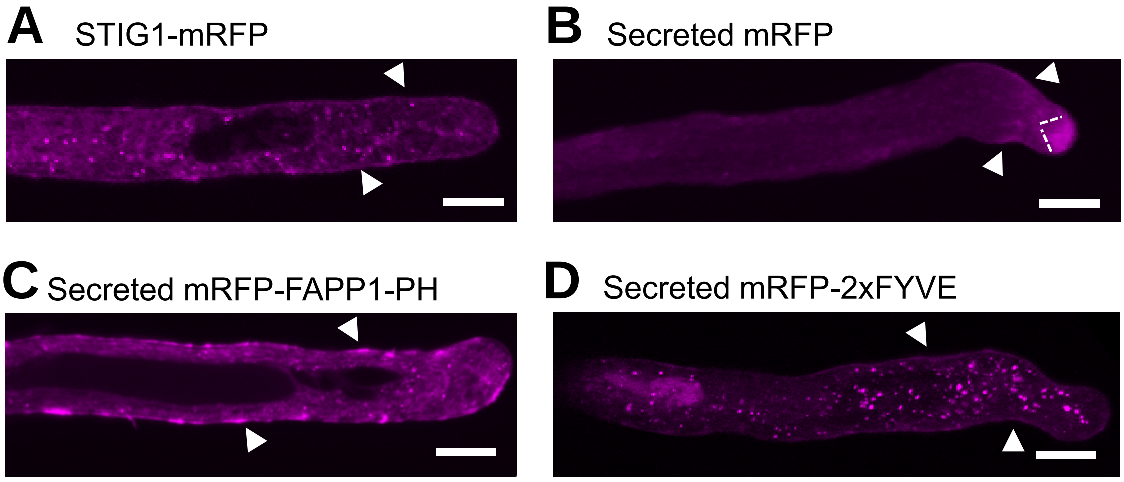
Supplemental Figure 3. STIG1 peptides identified by mass spectrophotometry of stigmatic exudate of tomato, tobacco and petunia. Tobacco and petunia peptides are boxed in dark grey or light grey. Tomato peptides identified from the 5-10 kDa section are boxed in red or blue. The additional peptides identified in the 10-15 kDa section are boxed in violet. Petunia peptide data are taken from Verhoeven et al., (2005). Identical (*) or similar (:) amino acids are noted below. Arrow indicates putative cleavage site.



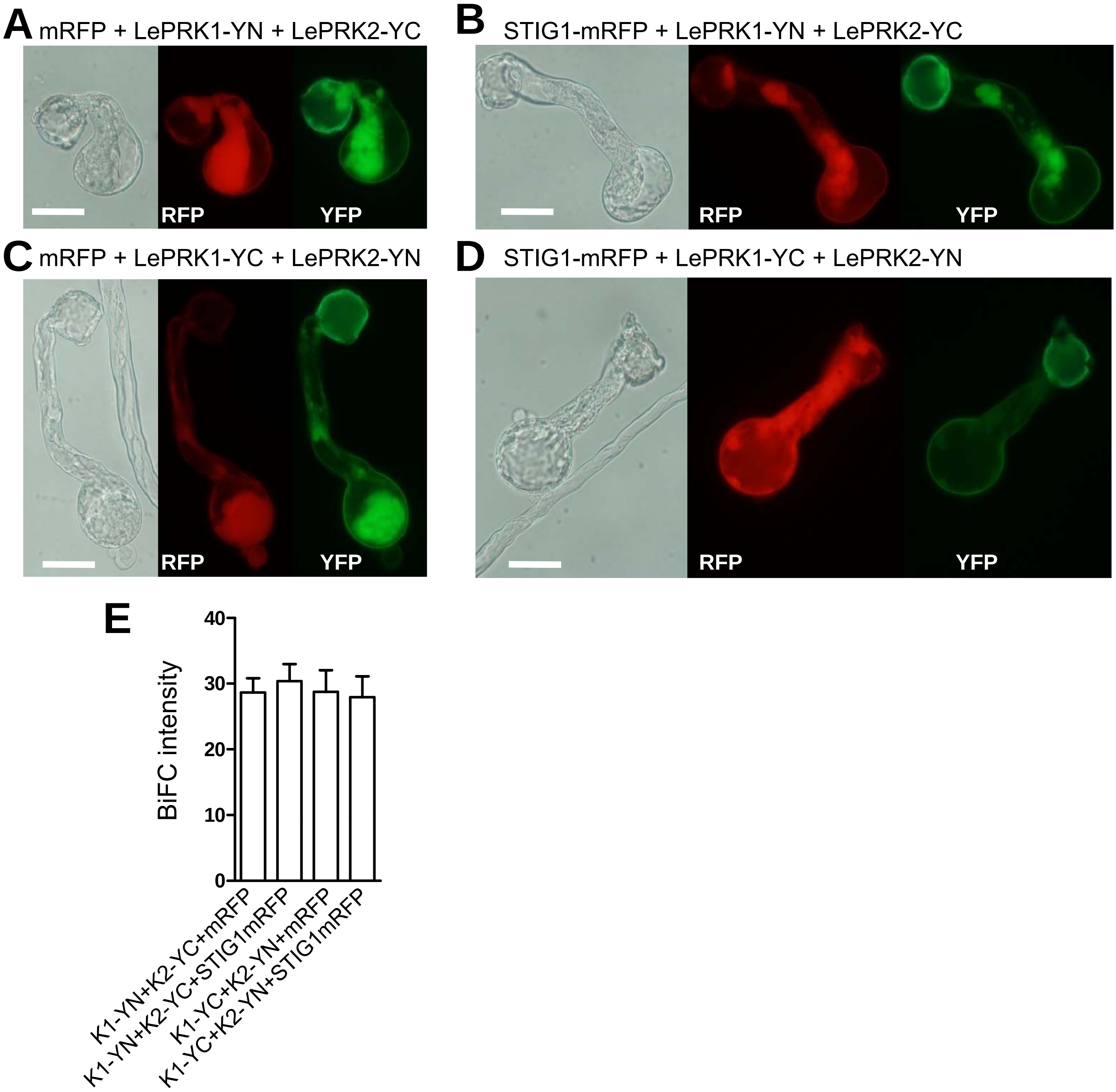
Supplemental Figure 4. Mature stigmas of *STIG1* RNAi plants have normal morphology but accumulate more exudate than wild-type stigmas. A. Representative images of mature stigmas from wild-type and *STIG1* RNAi plants. Conventional scanning electron microscopy. At least 6 mature stigmas were observed for each line. Scale bar = 50 µm. B. Representative images of the exudate on mature stigmas from wild-type and *STIG1* RNAi plants. Cryo-scanning electron microscopy. At least 8 mature stigmas were observed for each line. Scale bar = 100 µm.



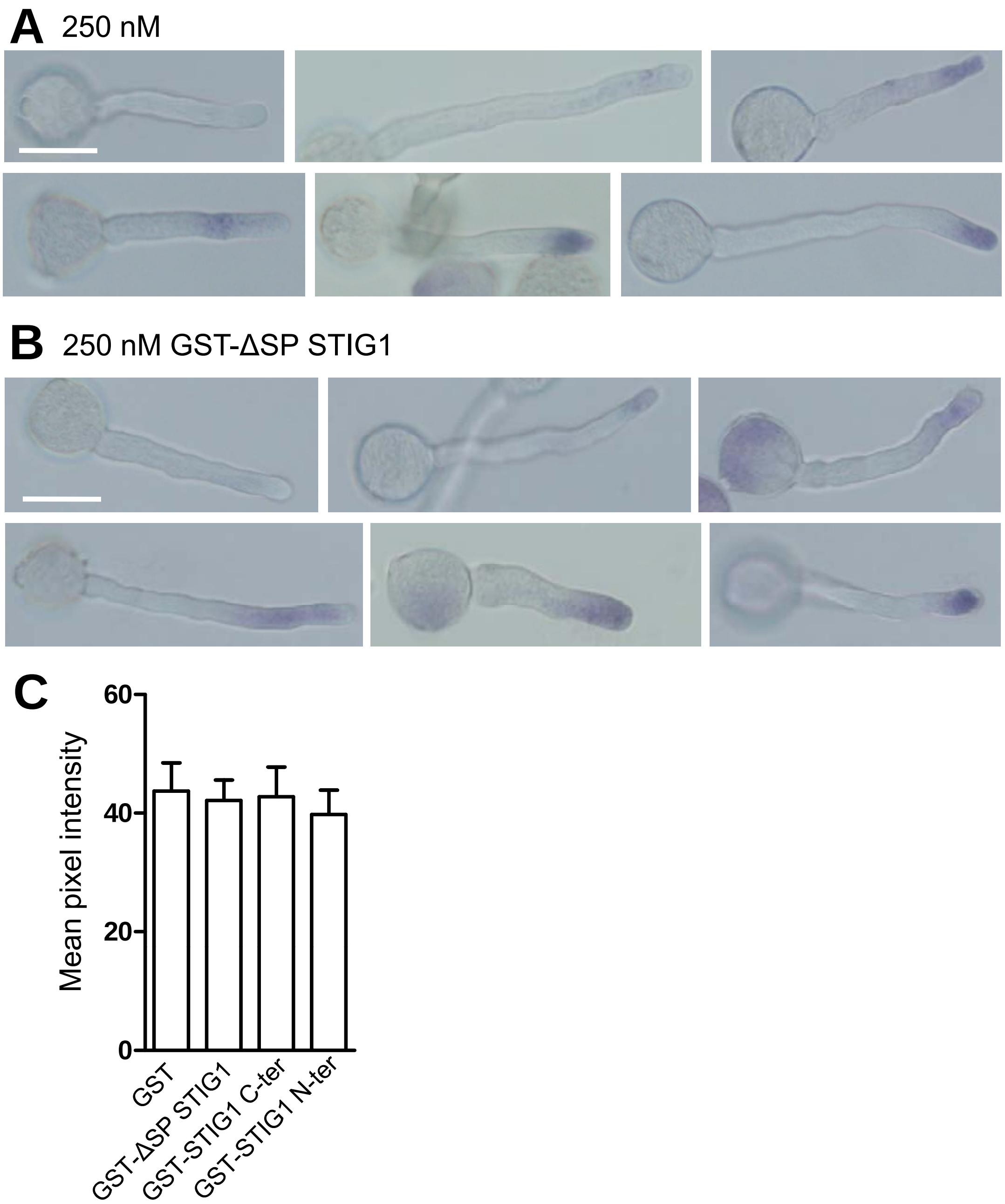
Supplemental Figure 5. STIG1 promotes pollen tube growth of tomato but not tobacco. A, B. STIG1 pollen tube growth promotion assay with tomato pollen (A) or tobacco pollen (B). C. Statistical analysis of the promotive effect of STIG1 in (A) and (B). The stimulation index is defined as the fold change between the area of the pollen tube cluster in the presence or absence of 250 nM STIG1. n = 3 independent experiments. Asterisks indicate a significant difference ($P < 0.05$; Student's t test). Error bars indicate standard error. Scale bar = 1 cm.



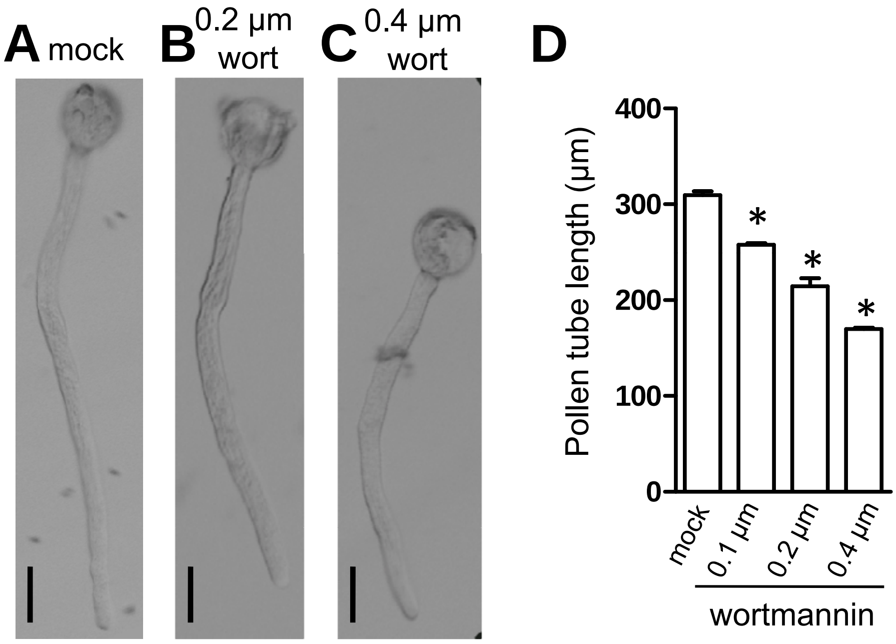
Supplemental Figure 6. STIG1 localizes both to the pollen tube wall and to intracellular punctate vesicles when ectopically expressed in pollen tubes. A-D. Representative pollen tubes expressing STIG1-mRFP (A), secreted mRFP (B), secreted mRFP-FAPP1-PH (C) or secreted mRFP-2xFYVE (D). In (B), (C) and (D), the coding sequences of mRFP, the PI(4)P marker mRFP-FAPP1-PH and the PI(3)P marker mRFP-2xFYVE were fused with the signal peptide coding region of LePRK2 at their N-termini. Arrowheads indicate the pollen tube margin. The dashed line in (B) indicates the clear zone. All genes were driven by the *LAT52* promoter and expressed transiently in tobacco pollen tubes. More than 15 tubes were observed for each bombardment experiment. Scale bar = 10 μm.



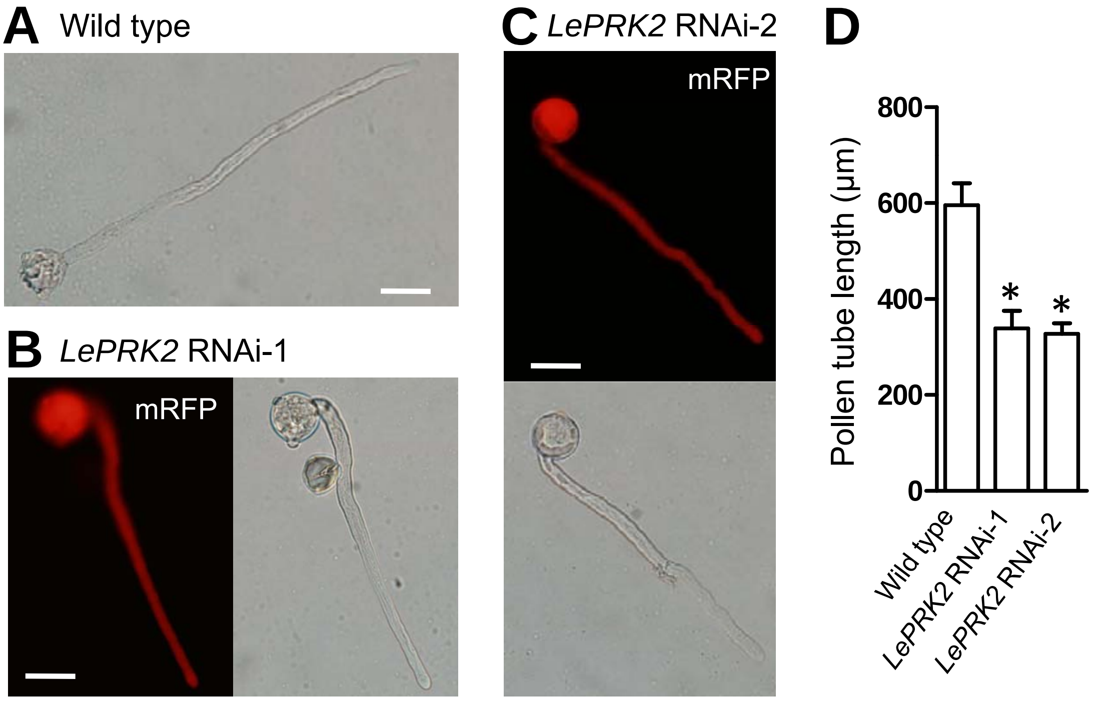
Supplemental Figure 7. STIG1 does not affect the BiFC interaction between LePRK1 and LePRK2. A-B. Representative pollen tubes co-expressing LePRK1-YN, LePRK2-YC with mRFP (A) or STIG1-mRFP (B). C-D. Representative pollen tubes co-expressing LePRK1-YC, LePRK2-YN with mRFP (C) or STIG1-mRFP (D). All genes were driven by the *LAT52* promoter and expressed transiently in tobacco pollen tubes. E. BiFC intensity of pollen tubes co-expressing the LePRK1-LePRK2 BiFC pairs with mRFP or STIG1-mRFP. n = 2 independent experiments. At least 16 pollen tubes of each category were measured in each experiment. Asterisks indicate a significant difference ($P < 0.05$; Student's t test). Error bars indicate standard error. Scale bar = 50 μm.



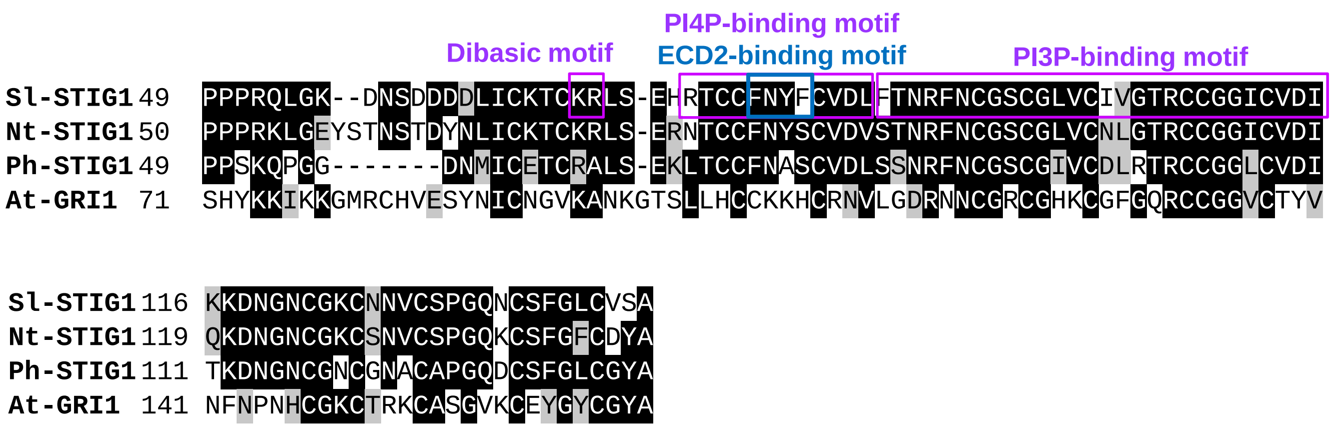
Supplemental Figure 8. Exogenous STIG1 did not affect extracellular superoxide production on the pollen tube surface. A and B. Representative images of NBT-stained pollen tubes growing in the presence of 250 nM recombinant GST (A) or GST-ΔSP STIG1 (B). Pollen tubes were cultured for 1.5 hours in a modified germination medium with 0.1 mM $CaCl_2$ and then stained with 1 mM NBT for 5 min. C. Mean pixel intensity of NBT-stained pollen tubes in the presence of GST or GST fusion proteins. n = 3 independent experiments. More than 16 pollen tubes of each group were measured in one experiment. Error bars indicate standard error. Scale bar = 30 μm.



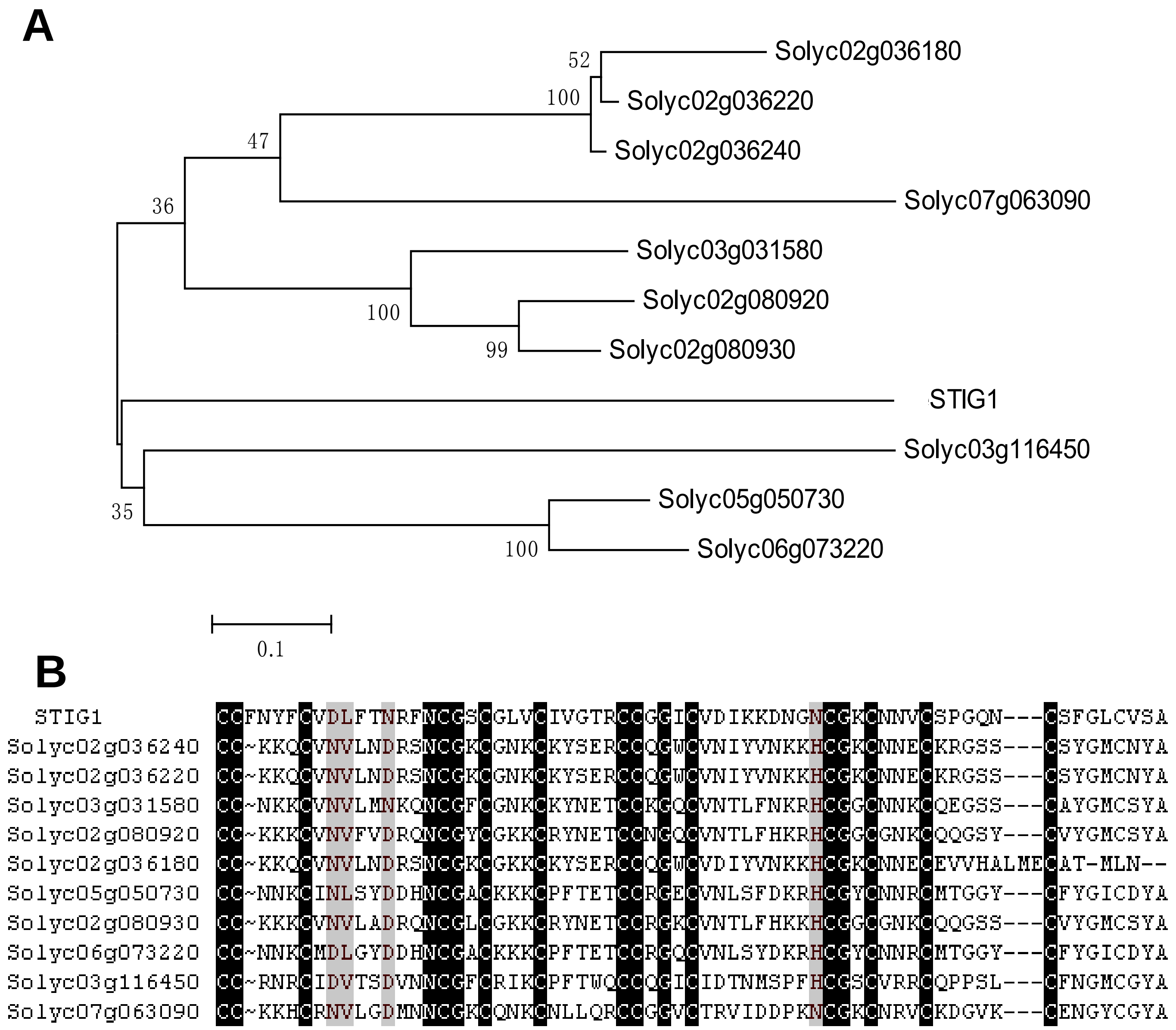
Supplemental Figure 9. Wortmannin reduces pollen tube length. Representative images of tomato pollen germinated in vitro and treated with DMSO (A), 0.2 µm Wortmannin (B) or 0.4 µm Wortmannin (C). D. Pollen tube lengths 3 hours after germination. N > 80. Asterisks indicate a significant difference from the control ($P < 0.05$; Student's t test). Error bars indicate standard error. Scale bar = 30 µm.



Supplemental Figure 10. *LePRK2* RNAi pollen grew shorter tubes in vitro. A-C. Representative images of a wild type pollen tube (A) or *LePRK2* RNAi pollen tubes (B and C) 2 hours after germination. D. Pollen tube lengths 4 hours after germination. n > 30, three independent experiments. Asterisks indicate a significant difference from wild type pollen tubes ($P < 0.05$; Student's t test). Error bars indicate standard error. Scale bar = 30 µm.



Supplemental Figure 11. Amino acid alignments of STIG1 homologs. Residues that are identical or conserved are shaded black or gray, respectively. Functional sites are boxed.



Supplemental Figure 12. STIG1 domain-containing proteins in tomato. A. Phylogenetic tree of STIG1 homologs in tomato. Amino acid sequences were analyzed by a neighbor-joining method with genetic distances calculated by the Poisson model of amino acid changes (MEGA 5.2, Tamura et al., 2011). The numbers at the nodes represent bootstrap values based on 1000 replications. The lengths of the branches are proportional to the expected numbers of amino acid substitutions per site; scale provided at the bottom. B. Amino acid alignments of STIG1 domains. Residues that are identical or conserved are shaded black or gray, respectively. (~) indicates an inserted gap.

Supplemental Table 1. Constructs

Use	Construct	Plasmid name	Insert or PCR product	Primers	Template	Plasmid backbone	Cloning method
Transient expression in tobacco pollen tubes	ProLAT52:mRFP	Pzd-05	Previously generated in Zhang et al., 2008				
	ProLAT52:eGFP	W33					
	ProLAT52:STIG1-mRFP	010-42	STIG1 cDNA	P1/P2	stigma cDNA	Pzd-05	SacI/EcoRI
	ProLAT52: secreted mRFP	011-61	LePRK2 signal peptide	P3/P4	pLAT52::LePRK2-GFP	Pzd-05	NcoI/NotI
	ProLAT52: BFP-FAPP1 PH	012-219	BFP -FAPP1-PH	P5/P6 P7/P8	pTagBFP-N PLEKHA3	Pzd-05	NcoI/EcoRI EcoRI/BamHI
	ProLAT52: secreted mRFP-2XFYVE	012-258	2xFYVE	P9/P10	ProLAT52:2XFYVE–mRFP	011-61	SpeI/NotI
	ProLAT52: secreted mRFP-FAPP1 PH	012-259	FAPP1 PH	P11/P12	012-219	011-61	SpeI/NotI
	STIG1 1-75-mRFP	012-13	STIG1 1-75	P1/P13	010-42	Pzd-05	SacI/EcoRI
	STIG1 16-75mRFP	012-52	STIG1 16-75	P14/P13	010-42	Pzd-05	SacI/EcoRI
	STIG1 76-143-mRFP	012-128	STIG1 76-143	P15/P2	010-42	Pzd-05	SacI/EcoRI
	STIG1 88-143-mRFP	012-32	STIG1 88-143	P16/P2	010-42	Pzd-05	SacI/EcoRI
	STIG1 76-87-mRFP	012-153	STIG1 76-87	P17/P18	012-128	Pzd-05	SalI/EcoRI
	STIG1 88-115-mRFP	012-87	STIG1 88-115	P17/P19	012-32	Pzd-05	SalI/EcoRI
	STIG1 77-87-mRFP	012-168	STIG1 77-87	P20/P21	012-153	Pzd-05	SacI/KpnI
	STIG1 78-87-mRFP	012-167	STIG1 78-87	P22/P21	012-153	Pzd-05	SacI/KpnI
	STIG1 79-87-mRFP	012-166	STIG1 79-87	P23/P21	012-153	Pzd-05	SacI/KpnI
	STIG1 76-86-mRFP	012-169	STIG1 76-86	P17/P24	012-153	Pzd-05	SalI/EcoRI
	STIG1 76-85-mRFP	012-170	STIG1 76-85	P17/P25	012-153	Pzd-05	SalI/EcoRI
	STIG1 76-84-mRFP	012-171	STIG1 76-84	P17/P26	012-153	Pzd-05	SalI/EcoRI
	STIG1 76-83-mRFP	012-172	STIG1 76-83	P17/P27	012-153	Pzd-05	SalI/EcoRI
	STIG1 88-114-mRFP	012-191	STIG1 88-114	P17/P28	012-87	Pzd-05	SalI/EcoRI
	STIG1 89-115-mRFP	012-193	STIG1 89-115	P29/P21	012-87	Pzd-05	SacI/KpnI
	STIG1 91-115-mRFP	012-195	STIG1 91-115	P30/P21	012-87	PZD05	SacI/KpnI
	STIG1 92-115-mRFP	012-196	STIG1 92-115	P31/P21	012-87	PZD05	SacI/KpnI
	STIG1 F80A-mRFP	012-215	STIG1 F80A	P32/P33	010-42	Pzd-05	Fast mutagenesis
	STIG1 N81A-mRFP	012-216	STIG1 N81A	P34/P35	010-42	Pzd-05	Fast mutagenesis
	STIG1Y82A F83A-mRFP	012-243	STIG1 Y82A F83A	P36/P37	010-42	Pzd-05	Fast mutagenesis
	STIG1 Y82A F83A F88D R91E F92D I115D-mRFP	012-247	STIG1 Y82A F83A F88D R91E F92D I115D	P38/P39 P40/P41	012-243	Pzd-05	Two step fast mutagenesis
	STIG1 V85D L87E-mRFP	012-209	STIG1 V85D L87E	P42/P43	010-42	Pzd-05	Fast mutagenesis
	STIG1 V85D L87E F88D R91E F92D I115D-mRFP	012-246	STIG1 V85D L87E F88D R91E F92D I115D	P44/P45 P40/P41	012-209	Pzd-05	Two step fast mutagenesis
	ProLAT52:LePRK2-YN	K308	(1) LePRK2; (2) YFP 1-172	P101/P102; P103/P104	(1) LePRK2 cDNA; (2) YFP	W33	(1) NcoI/SacI; (2) NheI/BamHI
	ProLAT52:LePRK2-YC	K310	(1) LePRK2; (2) YFP 172-238	P101/P102; P105/P106	(1) LePRK2 cDNA; (2) YFP	W33	(1) NcoI/SacI; (2) NheI/BamHI
	ProLAT52:LePRK1-YN	K307	(1) LePRK1; (2) YFP 1-172	P107/P108; P103/P104	(1) LePRK1 cDNA; (2) YFP	W33	(1) NcoI/SacI; (2) NheI/BamHI
	ProLAT52:LePRK1-YC	K309	(1) LePRK1; (2) YFP 172-238	P107/P108; P105/P106	(1) LePRK1 cDNA; (2) YFP	W33	(1) NcoI/SacI; (2) NheI/BamHI

Supplemental Table 1. Continued

Use	Construct	Plasmid name	Insert or PCR product	Primers	Template	Plasmid backbone	Cloning method
Yeast two-hybrid	BD-STIG1 16-143	011-145	STIG1 16-143	P46/P47	010-42	pGBKT7	EcoRI/PstI
	BD-STIG1 16-75	012-8	STIG1 16-75	P46/P48	010-42	pGBKT7	EcoRI/PstI
	BD-STIG1 76-143	012-9	STIG1 76-143	P49/P47	010-42	pGBKT7	EcoRI/PstI
	BD-STIG1 102-143	012-78	STIG1 102-143	P50/P47	010-42	pGBKT7	EcoRI/PstI
	BD-STIG1 76-83	012-182	STIG1 76-83	P51/P52	012-9	pGBKT7	XhoI/PstI
	BD-STIG1 80-83	012-205	STIG1 80-83	P51/P53	—	pGBKT7	XhoI/BamHI
	BD-STIG1 81-83	012-213	STIG1 81-83	P51/P54	—	pGBKT7	XhoI/BamHI
	BD-STIG1 80-82	012-214	STIG1 80-82	P51/P55	—	pGBKT7	XhoI/BamHI
	BD-STIG1 F80A	012-227	STIG1 F80A	P32/P33	011-145	pGBKT7	Fast mutagenesis
	BD-STIG1 N81A	012-228	STIG1 N81A	P34/P35	011-145	pGBKT7	Fast mutagenesis
	BD-STIG1 Y82A	012-229	STIG1 Y82A	P56/P57	011-145	pGBKT7	Fast mutagenesis
	BD-STIG1 F83A	012-230	STIG1 F83A	P58/P59	011-145	pGBKT7	Fast mutagenesis
	BD-STIG1 Y82A F83A	012-252	STIG1 Y82A F83A	P36/P37	011-145	pGBKT7	Fast mutagenesis
	BD-STIG1 Y82A F83A F88D R91E F92D I115D	012-256-2	STIG1 Y82A F83A F88D R91E F92D I115D	P46/P47	012-247	pGBKT7	EcoRI/PstI
	BD-V85D L87E F88D R91E F92D I115D-mRFP	012-255-2	STIG1 V85D L87E F88D R91E F92D I115D	P46/P47	012-246	pGBKT7	EcoRI/PstI
	AD-ECD2	011-138	ECD2	P60/P61	LePRK2 cDNA	pGADT7	NdeI/BamHI
Recombinant protein expression in ***E.Coli***	GST-Δ SP STIG1	011-98	Δ SP STIG1	P62/P63	010-42	pGEX4T3	BamHI/SalI
	GST- STIG1 N ter	012-23	Δ SP STIG1-N ter	P62/P64	010-42	pGEX4T3	BamHI/SalI
	GST- STIG1 C ter	012-22	ΔSP STIG1-C ter	P65/P63	010-42	pGEX4T3	BamHI/SalI
	GST-STIG1 F80A	012-248	ΔSP STIG1 F80A	P62/P63	012-215	pGEX4T3	BamHI/SalI
	GST-STIG1 Y82A F83A	012-249	ΔSP STIG1 Y82A F83A	P62/P63	012-243	pGEX4T3	BamHI/SalI
	GST-STIG1 Y82A F83A F88D R91E F92D I115D	012-250	ΔSP STIG1 Y82A F83A F88D R91E F92D I115D	P62/P63	012-247	pGEX4T3	BamHI/SalI
	GST-STIG1 V85D L87E F88D R91E F92D I115D	012-251	ΔSP STIG1 V85D L87E F88D R91E F92D I115D	P62/P63	012-246	pGEX4T3	BamHI/SalI
	GST-STIG1 N81A	012-256	ΔSP STIG1 N81A	P62/P63	012-216	pGEX4T3	BamHI/SalI
	GST-STIG1 76-87	012-237	STIG1 76-87	P66/P67	012-153	pGEX4T3	BamHI/NotI
	GST-STIG1 88-115	012-238	STIG1 88-115	P68/P67	012-87	pGEX4T3	BamHI/NotI
	6xHis-ECD2	012-102	ECD2	P69/P70	LePRK2 cDNA	pRSET-C	NheI/BamHI
	6xHis-ΔSP STIG1-mRFP	012-108	ΔSP STIG1	P71/P72	010-42	pRSET-C	NheI/KpnI
	6xHis-eGFP	014-1	eGFP	P73/P74	W33	pRSET-C	NheI/EcoRI
	6xHis-eGFP-2xFYVE	014-2	eGFP-2xFYVE	P75/P76	014-1	pRSET-C	NcoI/EcoRI

Supplemental Table 1. Continued

Use	Construct	Plasmid name	Insert or PCR product	Primers	Template	Plasmid backbone	Cloning method
LePRK2-OX (010-184)	ProLePRK2:eGFP	010-142	LePRK2 promoter	P77/P78	Genomic DNA	W33	ClaI/NcoI
	ProLePRK2:LePRK2-eGFP	010-160	LePRK2	P79/P80	LePRK2 cDNA	010-142	NcoI/NotI
	pC2300-ProLePRK2:LePRK2-eGFP	010-184	ProLePRK2:LePRK2-eGFP	—	010-160	pCAMBIA 2300	PstI
STIG1-OX (012-1)	Pro35S:STIG1-mRFP	011-132	CaMV 35S promoter	P81/P82	pPK100	010-42	SalI/SacI
	pC2300-Pro35S:STIG1-mRFP	012-1	Pro35S:STIG1-mRFP	—	011-132	pCAMBIA 2300	HindIII
roGFP1 (09-46)	ProLAT52-roGFP1	09-36	RoGFP1	P83/P84	roGFP1 cDNA	Pzd-05	NcoI/BamHI
	pC2300-ProLAT52-roGFP1-eGFP	09-46	ProLAT52-RoGFP1-eGFP	—	09-36	pCAMBIA 2300	HindIII
STIG1-RNAi (09-102)	Pro35S:LAT52 intron:35 S terminator	09-69	(1)Pro35S; (2) LAT52 intron;(3)35S terminator	(1)P85/P86; (2)P87/P88; (3)P89/P90	(1),(3) pPK100; (2) Genomic DNA;	pTG19-T	(1)SacI/XhoI; (2)XhoI/XbaI; (3)XbaI/HindIII
	STIG1 RNAi casset	09-80	(1) STIG1 sense; (2) STIG1 antisense	(1)P91/P92; (2)P93/P94	(1), (2) STIG1 cDNA	09-69	(1)XhoI/EcoRV; (2)NdeI/NcoI
	pC2300- STIG1 RNAi	09-102	STIG1 RNAi casset	—	09-80	pCAMBIA 2300	SacI/PstI
LePRK2-RNAi (09-114)	ProLAT52:LAT52 intron:35 S terminator	09-71	(1)ProLAT52; (2) LAT52 intron;(3)35S terminator	(1)P95/P96; (2)P87/P88; (3)P89/P90	(1), (3) Pzd05; (2) Genomic DNA;	pTG19-T	(1)EcoRI/XhoI; (2)XhoI/XbaI; (3)XbaI/HindIII
	LePRK2 RNAi casset	09-82	(1) LePRK2 sense; (2) LePRK2 antisense	(1) P97/P98; (2) P99/P100	(1), (2) LePRK2 cDNA	09-71	(1)XhoI/EcoRV; (2)NdeI/SpeI
	pC2300- LePRK2 RNAi	09-91	LePRK2 RNAi casset	—	09-82	pCAMBIA 2300	EcoRI/HindIII
	pC2300- LePRK2 RNAi-mRFP	09-114	ProLAT52:mRFP:35S terminator	—	Pzd-05	09-91	HindIII

Zhang, D., Wengier, D., Shuai, B., Gui, C.P., Muschietti, J., McCormick, S., and Tang, W.H. (2008). The pollen receptor kinase LePRK2 mediates growth-promoting signals and positively regulates pollen germination and tube growth. Plant physiol. **148:** 1368–1379.

Supplemental Table 2. Primers

Primer	Sequence (5'-3')	Primer	Sequence (5'-3')
P1	GAGCTCCATGGATTTTATCATCCTTCTCATC	P36	CACCGTACATGTTGTTTCAACGCCGCTTGTGTTGATTTGTTCAC
P2	GAATTCGGCACTGACACAAAGGCCAAATGAG	P37	GTGAACAAATCAACACAAGCGGCGTTGAAACAACATGTACGGTG
P3	CCATGGGCATGTCATCACAAAAAAACTAC	P38	CACCGTACATGTTGTTTCAACGCCGCTTGTGTTGATTTGGACACCAAC
P4	GCGGCCGCTTGCCTCTGTCACAAATGCTAATG	P39	GTTGGTGTCCAAATCAACACAAGCGGCGTTGAAACAACATGTACGGTG
P5	CCATGGGCATGAGCGAGCTGATTAAGGAG	P40	GCGGTGGGATCTGTGTGGACGACAAGAAAGACAACGGAAATTG
P6	GAATTCCATTAAGCTTGTGCCCCAGTTTGC	P41	CAATTTCCGTTGTCTTTCTTGTCGTCCACACAGATCCCACCGC
P7	GAATTCTCATGGAGGGGGTGTTGTACAAG	P42	GTTGTTTCAACTACTTTTGTGATGATGAGTTCACCAACAGGTTCAACTG
P8	GGATCCTTATTTAGTCCTTGTATCAGTCAAAC	P43	CAGTTGAACCTGTTGGTGAACTCATCATCACAAAAGTAGTTGAAACAAC
P9	ACTAGTTTATGCCTTCTTGTTCAGCTGC	P44	GTTGTTTCAACTACTTTTGTGATGATGAGGACACCAACGAGGACAACTG
P10	GCGGCCGCTTATGCCTTCTTGTTCAGCTGC	P45	CAGTTGTCCTCGTTGGTGTCCTCATCATCACAAAAGTAGTTGAAACAAC
P11	ACTAGTAGTGGACCAACTATCTCACAG	P46	GAATTCACACCAATTACCATTATATCCG
P12	GCGGCCGCTTATTTAGTCCTTGTATCAGTCAAACATG	P47	CTGCAGTTAGGCACTGACACAAAGGCCAAATG
P13	GAATTCGTGTTCTGATAATCTCTTGCAAGTTTTG	P48	CTGCAGTTAGTGTTCTGATAATCTCTTGCAAG
P14	GAGCTCGACACCAATTACCATTATATC	P49	GAATTCCGTACATGTTGTTTCAACTAC
P15	GAGCTCCCGTACATGTTGTTTCAACTACTTTTG	P50	GAATTCATCGTTGGAACAAGATGCTGCG
P16	GAGCTCGTTCACCAACAGGTTCAACTGTGGC	P51	CTCGAGAAGACCTTGACATGATTTTG
P17	GCAGGTCGACATACTCGACTCAGAAGGTATTG	P52	CTGCAGTTAAAAGTAGTTGAAACAACATGTAC
P18	GAATTCCAAATCAACACAAAAGTAGTTG	P53	GGATCCTTAAAAGTAGTTGAACATATGCAGGTCCTCCTCTGAGATCAG
P19	GAATTCGATGTCCACACAGATCCCACC	P54	GGATCCTTAAAAGTAGTTCATATGCAGGTCCTCCTCTGAGATCAG
P20	GAGCTCCACATGTTGTTTCAACTACTTTTG	P55	GGATCCTTAGTAGTTAAACATATGCAGGTCCTCCTCTGAGATCAG
P21	GGTACCTTAGGCGCCGGTGGAGTGGC	P56	CACCGTACATGTTGTTTCAACGCCTTTTGTGTTGATTTGTTCAC
P22	GAGCTCCTGTTGTTTCAACTACTTTTGTG	P57	GTGAACAAATCAACACAAAAGGCGTTGAAACAACATGTACGGTG
P23	GAGCTCCTGTTTCAACTACTTTTGTGTTG	P58	GTACATGTTGTTTCAACTACGCTTGTGTTGATTTGTTCACCAAC
P24	GAATTCATCAACACAAAAGTAGTTGAAACAAC	P59	GTTGGTGAACAAATCAACACAAGCGTAGTTGAAACAACATGTAC
P25	GAATTCAACACAAAAGTAGTTGAAACAAC	P60	CATATGCGGGGTTCTCATCATCATCATC
P26	GAATTCACAAAAGTAGTTGAAACAACATG	P61	GGATCCCTTCCAACCTGATGATGATGATG
P27	GAATTCAAAGTAGTTGAAACAACATGTAC	P62	GGATCCACACCAATTACCATTATATCCGGA
P28	GAATTCGTCCACACAGATCCCACCGCAGC	P63	GTCGACTTAGGCACTGACACAAAGGCCAAATG
P29	GAGCTCGACCAACAGGTTCAACTGTGGCTC	P64	GTCGACTTAGTGTTCTGATAATCTCTTGCAAG
P30	GAGCTCGAGGTTCAACTGTGGCTCCTGTG	P65	GGATCCCGTACATGTTGTTTCAACTAC
P31	GAGCTCGTTCAACTGTGGCTCCTGTGGC	P66	GGATCCCGTACATGTTGTTTCAACTAC
P32	CAGAACACCGTACATGTTGTGCCAACTACTTTTGTGTTGATTTG	P67	GCGGCCGCTAAAGGGAACAAAAGCTGGGTAC
P33	CAAATCAACACAAAAGTAGTTGGCACAACATGTACGGTGTTCTG	P68	GGATCCTTCACCAACAGGTTCAACTGTGGC
P34	GAACACCGTACATGTTGTTTCGCCTACTTTTGTGTTGATTTGTTC	P69	GCTAGCAACTTATCAGAGCCTGAGGTTC
P35	GAACAAATCAACACAAAAGTAGGCGAAACAACATGTACGGTGTTC	P70	GGATCCCTTCCAACCTGATGATGATG

Supplemental Table 2. Continued

Primer	Sequence (5'-3')
P71	GCTAGCTCTGTGACAAACCATACATATTC
P72	TGGTACCTTAGGCGCCGGTGGAGTGGCGGCCCTC
P73	GCTAGCATGCTGAGCAAGGGCGAGGAG
P74	GAATTCTTACTTGTACAGCTCGTCCATG
P75	CCATGGGAGGTGCTGGTGCTGGTGCTGGTGC
P76	GAATTCTTATGCCTTCTTGTTCAGCTG
P77	ATCGATTGGTGCATTTTCTTCAACTTCCTC
P78	CCATGGGATTGCATAGAGAAGAGAGTCAGTC
P79	CCATGGGCATGTCATCACAAAAAAACTAC
P80	GCGGCCGCCTCTTGAAGTATGCATATTGTCAACTTC
P81	GTCGACGAGCACGACACACTTGTCTACTCC
P82	GAGCTCGGCTATCGTTCGTAAATGGTGA
P83	CCATGGTGAGCAAGGGCGAGGAGCTGTTC
P84	GGATCCCCAAGATTTTACTTGTACAGCTCGTCCATGCC
P85	GAGCTCGAGCACGACACACTTGTCTACTCC
P86	CTCGAGGGCTATCGTTCGTAAATGGTGA
P87	CTCGAGAGATCTGCGGCCGCGATATCGAATTGGTATATACTATATTTTCATTCAC
P88	ACTAGTCCATGGGCTAGCCATATGTCCCAACTATTTGCAACAAAACAAAACAT
P89	TCTAGAGTCCGCAAAAATCACCAGTCTC
P90	AAGCTTGCATGCCTGCAGGTCACTGGA
P91	CTCGAGATGGATTTTATCATCCTTCTC
P92	GATATCGGCACTGACACAAAGGCCAAATG
P93	CCATGGATGGATTTTATCATCCTTCTC
P94	CATATGGGCACTGACACAAAGGCCAAATG
P95	GAATTCGTCGACATACTCGACTCAGAAGGTATTGAG
P96	CTCGAGGTAATTGGAAATTTTTTTTTTGG
P97	CTCGAGATGTCATCACAAAAAAACTAC
P98	GATATCTGATCAATTGGACCAGAAAACTTG
P99	ACTAGTATGTCATCACAAAAAAACTAC
P100	CATATGTGATCAATTGGACCAGAAAACTTG
P101	CCATGGCATCACAAAAAAACTACAAAAAC
P102	GAGCTCCTTGAAGTATGCATATTGTCAAC
P103	GCTAGCGTGAGCAAGGGCGAGGAGCTG
P104	GGATCCTTAGTCCTCGATGTTGTGGCGGATC
P105	GCTAGCGGCAGCGTGCAGCTCGCCGAC
P106	GGATCCTCACTTGTACAGCTCGTCCATGC
P107	CCATGGCGGTGGCTTATCGTTATAGC
P108	GAGCTCATGTTCATCGAAACCTGAGTATA