

Supplemental Table S2. (Putative) cold regulated genes induced by AC2

Gene/Product	Basal transcript level on control chips	AC2	Fold induction on AC2 chips	Flag
At3g15280, unknown, low similarity to cold regulated gene REP14, <i>Secale cereale</i>	25 (7 to 35)	MYMV ACMV	25x 12x	A P P
At5g15960, cold and ABA inducible protein KIN1	52 (32 to 84)	MYMV ACMV	23x 6x	A,P P P
At2g15970, similar to cold acclimation protein WCOR413, <i>Triticum aestivum</i>	1851 (301 to 6053)	MYMV ACMV	8x 15x	P P P
At2g42530, cold-regulated protein COR15b precursor	61 (30 to 80)	MYMV ACMV	5x 10x	A,P P P
At4g30650, low temperature and salt responsive homologue of low temperature and salt responsive LTI6A, <i>A. thaliana</i>	316 (240 to 418)	MYMV ACMV	5x 5x	P P P
At5g15960, stress responsive homolog of low temperature and salt responsive protein LTI6A, <i>A. thaliana</i>	370 (271 to 445)	MYMV ACMV	2x 3x	P P P

Supplemental Table S3. Scarecrow transcription factor-like genes up-regulated by AC2

Gene/Product	Basal transcript level on control chips	AC2	Fold induction on AC2 chips	Flag
At2g45160, Scarecrow transcription regulator-like, SCL6-II	151 (88 to 299)	MYMV ACMV	3x 3x	A,P P P
At5g52510, Scarecrow transcription regulator-like, SCL8	233 (141 to 288)	MYMV ACMV	6x 5x	P P P

Supplemental Table S4. PCR-primers for AC2-inducible gene promoters from Arabidopsis

Gene/Product	Promoter region oligonucleotides: sense (NcoI underlined) and anti-sense (NcoI underlined, ATG start codon in bold), respectively	Promoter region length
At3g12460, Hypothetical 3'-5' exonuclease, WEL	5'tcgag <u>CCatg</u> Gaggcatcgagtgagatcggaagc and 5'cggag <u>ccatGg</u> Ttttgcctcagttttcaagcagag	980
At1g02813, Expressed protein	5'aagcacc <u>TgG</u> tgttcggttacggagcggcgag and 5'aatgg <u>CcatG</u> gtttctgtttaactatctctgtg	1064
At1g13610, Hypothetical protein	5'gtaag <u>CcatGG</u> atctcggtattaacaaattagtcgtg and 5'cgccg <u>ccatG</u> gtcgacgtcgcaattccatttc	984
At5g11540, Putative FAD-like oxidase	5'ccaga <u>CcatGG</u> Ttattatacacgtatcggtcattcggt and 5'gtaac <u>CcatgG</u> tatttgagagattatgtaattccgat	990
At4g39675, Expressed, similar to HIV-1 p17	5'gcacc <u>CatgG</u> tactctaaacgtaaacctacac and 5'aaaat <u>CCatgG</u> Ttaagaataagatgtggttaagatttcg (the artificial ATG: 30 nt upstream of the first ATG, 70 nt downstream of putative TATA-box)	894
At5g15960, Cold and ABA inducible protein KIN1	5'ccaa <u>ccatgg</u> gcttactactgatcc and 5'ctctg <u>CcatG</u> tttcagatatttattctgtaaaatcgt	793

Additional supplemental information:

1. CMA medium for *Arabidopsis* protoplasts (after J. Masson, ETH Zentrum, Zuerich; Karesch 1991)

ddH ₂ O	700 ml
B5 macro	100 ml
B5 micro	1 ml
FeCl ₃ x 6H ₂ O stock (2.7 g/500 ml)	5 ml
Na ₂ EDTA stock (7.46 g/500 ml)	5 ml
B5 vita	10 ml
Glucose	80 g
Naphthalene acetic acid (NAA) stock (20 mg/100 ml)	5 ml
6-Benzylamino purine (6-BA) stock (20 mg/100 ml)	2.7 ml

Stir for 1 hour, adjust pH to 5.8
Add ddH₂O to 1 liter
Sterilize by filtration

B5 macro (1 liter):

ddH ₂ O	950 ml
KNO ₃	25 g
NaH ₂ PO ₄ x H ₂ O	1.5 g
(NH ₄) ₂ SO ₄	1.34 g
MgSO ₄ x 7H ₂ O	2.5 g
CaCl ₂ x 2H ₂ O	1.5 g

Stir and adjust volume to 1 liter
Sterilize by autoclaving or filtration

B5 micro (100 ml):

ddH ₂ O	90 ml
MnSO ₄ x H ₂ O	1 g
Na ₂ MoO ₄ x 2H ₂ O	25 mg
H ₃ BO ₃	300 mg
ZnSO ₄ x 7H ₂ O	200 mg
CuSO ₄ x 5H ₂ O	2.5 mg
CoCl ₂ x 6H ₂ O	2.5 mg
KJ	75 mg

Stir and adjust volume to 100 ml
Sterilize by autoclaving or filtration

B5 vita (200 ml):

ddH ₂ O	190 ml
Nicotinic acid	20 mg
Pyridoxin HCl	20 mg
Thiamin HCl	200 mg
Inositol	2 g

Stir and adjust volume to 200 ml
Sterilize by autoclaving or filtration

2. K3 medium for *Nicotiana plumbaginifolia* protoplasts

NaH ₂ PO ₄ x H ₂ O	150 mg/l
CaCl ₂ x 2H ₂ O	900 mg/l
KNO ₃	2500 mg/l
NH ₄ NO ₃	250 mg/l
(NH ₄) ₂ SO ₄	134 mg/l
MgSO ₄ x 7H ₂ O	250 mg/l
FeCl ₃ x 6H ₂ O	270 mg/l
Na ₂ EDTA	746 mg/l
B5 micro	1 ml
B5 vita	10 ml
NAA	1 mg/l
6-BA	0.2 mg/l
2,4-D	0.1 mg/l
xylose	250 mg/l
glucose (or sucrose)	0.4 M

Adjust pH to 5.6 and volume to 1 liter
Sterilize by filtration