

Table S1. The summary of expression of auxin early response genes during the transformation from NEC to EC.

Families	Number of expressed genes during embryogenic transformation						Total
	TPM<1	1<TPM<5	5<TPM<10	10<TPM<30	30<TPM<50	TPM>50	
ARF	4	3	14	0	40	10	71
Aux/IAA	14	15	5	0	31	21	86
GH3	26	10	9	0	15	3	63
SAUR	114	45	35	0	0	0	194

Table S2. Primers used for qRT-PCR validation of expression pattern of auxin early response genes.

Families	Gene ID	Forward primer	Reverse primer
ARF	<i>Ghir_A10G002560</i>	AGAACTTTTGCAGATGCGGTC	TTACAGACCGGAACTATGAACTCC
	<i>Ghir_D10G003340</i>	CACTTTTGCAGATGCGGTCC	TACAGACCGGAACTATGAACTCC
Aux/IAA	<i>Ghir_A05G002590</i>	TGGGAATATTGCTCCAGCTTCA	AGGGTGAGAAGCCATCGTATTC
	<i>Ghir_A06G020380</i>	TGCTTGTCGGTGATGTCCC	TGCTTCCAAGGTTGATAACGG
	<i>Ghir_A09G024180</i>	AGTTTGGCTTCAGCACTCGATA	CCATCCAAAAGCTTAGATGGCA
	<i>Ghir_D05G002730</i>	TGGGAATATTGCTCCAGCTTCA	TCATTCTTCGGAGGGTGAGC
	<i>Ghir_D05G004880</i>	GCCTCCACTAACATTACCTCCA	GCTTGGACAAGCTGTTGCTC
	<i>Ghir_D09G023320</i>	GATCAATCTGTCCCCCATGACG	AGCTGTTTCATCCTGTAAGACCT
GH3	<i>Ghir_A01G008830</i>	GCCCTGTAACTGCTGTGATGA	GCCACAAGGAGTTTCAGTCTCT
	<i>Ghir_A05G040190</i>	TAAACCCGTTACAGGGCACTT	AGTTTCAATCTCTGGTCTGGCA
SAUR	<i>Ghir_A03G022510</i>	ATTTATGGACACCTCACGTTGC	AGACATAATCAATGCTTTCTCCACT
	<i>Ghir_D13G010120</i>	AAGAGTTCGGCTTCGATCACC	TCGTTGAAGAGGACAAGTATGC