

Supplementary Materials: β -Ketoacyl-acyl Carrier Protein Synthase I (KASI) Plays Crucial Roles in the Plant Growth and Fatty Acids Synthesis in Tobacco

Tianquan Yang, Ronghua Xu, Jianghua Chen and Aizhong Liu

Table S1. The Primer information used in this study.

Primer	Sequence	Target
NtKASI-1F	5'-ATGCAATCAATCCAATCTCCAT-3'	whole cDNA
NtKASI-1R	5'-TTAAGGCTTGAATGCAGAAAAG-3'	whole cDNA
NtKASI-2F	5'-ATGCAAGCTCTTCAATCTTCATC-3'	whole cDNA
NtKASI-2R	5'-TCAGGGCTTGAATGCAGAAA-3'	whole cDNA
35SP	5'-AAGCAATCAAGCATTCTACTTC-3'	35SP
NosR	5'-TGTACGAATTGCATTAAGTTGT-3'	NosR
RT1-1F	5'-GAGTGCCCTTTATTTTCAGCTTCA-3'	for Real-Time PCR
RT1-1R	5'-AACCCCTTTTCTTTGGGTCTTTTC-3'	for Real-Time PCR
RT1-2F	5'-CTCACTCCGTTTATCTCAGCTTCA-3'	for Real-Time PCR
RT1-2R	5'-GTTATGACCACGCGTCTTTC-3'	for Real-Time PCR
NtActinF	5'-AAGGGATGCGAGGATGGA-3'	for Real-Time PCR
NtActinR	5'-CAAGGAAATCACCGCTTTGG-3'	for Real-Time PCR
RNAiF-1F	5'-GCAATCAATCCAATCTCCATCTTTC-3'	RNAi consturct
RNAiF-1R	5'-CTCGCCGGACACGCTGAACTT GTGTTTCTCTTTGGGAGCGGAAAC-3'	RNAi consturct
RNAiR-1F	5'-GACACCCTGGTGAACCGCATCGAGT TTCTCTTTGGGAGCGGAAAC-3'	RNAi consturct
RNAiR-1R	5'-GCAATCAATCCAATCTCCATCTTTC-3'	RNAi consturct
GFPi-1F	5'-CTGTTTCCGCTCCCAAAAGAGAA ACACAAGTTCAGCGTGTCG-3'	RNAi consturct
GFPi-1R	5'-CTGTTTCCGCTCCCAAAAGAGAA ACTCGATGCGGTTCAACCAG-3'	RNAi consturct
RNAiF-2F	5'-CCACCCATTCTCAAACCCA-3'	RNAi consturct
RNAiF-2R	5'-cctgcgacacgctgaactgtgCAGAAAA CAGAAACAAGGCCCA-3'	RNAi consturct
RNAiR-2F	5'-cgacaccctggtgaaccgcatcgagCAGAAAA ACAGAAACAAGGCCCA-3'	RNAi consturct
RNAiF-2R	5'-CCACCCATTCTCAAACCCA-3'	RNAi consturct
GFPi-2F	5'-GGATGGGCCTTGTCTGTTT TTGGCACAAGTTCAGCGTGTCG-3'	RNAi consturct
GFPi-2R	5'-GGATGGGCCTTGTCTGTTT TGGCTCGATGCGGTTCAACCAG-3'	RNAi consturct
RNAiF-12F	5'-AGCAGCCTTGAAGATGCTGG-3'	RNAi consturct
RNAiF-12R	5'-cctgcgacacgctgaactgtgGACTT GGTGCATTCAATTTGA-3'	RNAi consturct
RNAiR-12F	5'-cgacaccctggtgaaccgcatcgagGACTT TGGTTGCATTCAATTTGA-3'	RNAi consturct
RNAiR-12R	5'-AGCAGCCTTGAAGATGCTGG-3'	RNAi consturct
GFPi-12F	5'-ATCAAAATGAATGCAACCAAGTCCA CAAGTTCAGCGTGTCG-3'	RNAi consturct
GFPi-12R	5'-ATCAAAATGAATGCAACCAAGTCC TCGATGCGGTTCAACCAG-3'	RNAi consturct
Hpt-F	5'-AGGGCGAAGAATCTCGTGCT-3'	hygromycin-specific primers DNA detection
Hpt-R	5'-TCGCCTCGCTCCAGTCAATG-3'	hygromycin-specific primers DNA detection
RT2i-F	5'-TGCAAGCTCTTCAATCTTCATC-3'	Real-Time for kasI-2 RNAi plants
RT2i-R	5'-TGAAGCTGAGATAAACGGAGTG-3'	Real-Time for kasI-2 RNAi plants
Probe1-1F	5'-GATTGATAAGGAGAGAGCAGGT-3'	Northern blot
Probe1-1R	5'-GCATTTACCTCGGCTATATCAC-3'	Northern blot
Probe1-2F	5'-CTGGTGAAAGTGGGATTAGTCT-3'	Northern blot
Probe1-2R	5'-GGTCAGTCATGTGATAAGCATC-3'	Northern blot

Table S2. Fatty acid composition (%) of TAG isolated from seeds of WT and transgenic plants.

FA Species	WT	KASI-1OE	KASI-2OE	kasI-1 RNAi	kasI-2 RNAi	kasI-1/2 RNAi
16C	9.21 ± 0.74	9.17 ± 0.34	9.81 ± 0.15	10.08 ± 0.68	9.02 ± 0.24	9.85 ± 0.12
16C1	0.15 ± 0.08	0.17 ± 0.03	0.19 ± 0.06	0.15 ± 0.02	0.15 ± 0.02	0.18 ± 0.05
18C	3.34 ± 0.65	3.35 ± 0.32	3.81 ± 0.07	3.73 ± 0.53	2.82 ± 0.21	3.69 ± 0.09
18C1	14.24 ± 0.84	13.73 ± 0.53	14.29 ± 0.55	16.53 ± 0.90	12.40 ± 0.54	15.50 ± 0.04
18C2	70.73 ± 1.95	71.30 ± 0.92	70.03 ± 0.66	67.46 ± 1.58	73.54 ± 0.65	68.65 ± 0.23
18C3	1.47 ± 0.40	1.45 ± 0.53	1.32 ± 0.14	1.21 ± 0.16	1.57 ± 0.40	1.58 ± 0.24
20C	0.63 ± 0.55	0.44 ± 0.07	0.36 ± 0.09	0.36 ± 0.08	0.28 ± 0.06	0.36 ± 0.04
20C1	0.18±0.07	0.13 ± 0.04	0.14 ± 0.04	0.18 ± 0.04	0.13 ± 0.03	0.14 ± 0.03
22C	0.09 ± 0.02	0.08 ± 0.03	0.07 ± 0.03	0.06 ± 0.02	0.08 ± 0.02	0.07 ± 0.03