Table S1. Types and number of tRNA

TibetA	tRNA(type)	trnY	trnI	trnM	trnQ	trnH	trnS	trnW	trnP	trnL	trnE	trnC	trnN	trnT	trnG	trnK	trnD	total
	Number	4	1	4	1	1	3	1	1	1	1	1	2	1	1	1	1	25
Tibet B	tRNA(type)	trnY	trnI	trnM	trnQ	trnH	trnS	trnW	trnP	trnL	trnE	trnC	trnN	trnT	trnG	trnK	trnD	total
	Number	4	2	4	1	1	3	1	2	1	1	1	1	1	1	1	1	26

Table S2. Number of positive transgenic T_1 plants obtained with each constructs

Constructs	*No.of PCR positive transgenic plants*	*No.of fertile plants*	*No.of sterile plants*
V35S	36	36	0
VAP3-1	8	0	8
VAP3-2	6	0	6
VAP3-CK	35	35	0

Table S3. PCR and qRT-PCR primers used in this study.

Primer name	Primer sequence (5′- 3′)	Application
AP3BR	CGGGATCCATTCTTCTCTCTTTGTTTAATC	amplication of *AP3* promoter
AP3F	GGGGTACCCAGTAACTGTGGCCAACTTAGTTTGAAAC	amplication of *AP3* promoter
coxVIF	CGGGATCCATGCTTTCACTACGTCAATCTA	amplication of *coxVI*presequence
T-463aL	ACAGCCATCGAACCAGATTTTTCATAAGCAGATATCTAGAGCTACACAAA	amplicationof *cox VI*presequence
T-463aF	TTTGTGTAGCTCTAGATATCTGCTTATGAAAAATCTGGTTCGATGGCTGT	amplication of *orf463a*
463aF	CGGGATCCATGAAAAATCTGGTTCGATGG	amplication of *orf463a*
463aL	ACGCGTCGACTTATTTCGTCTTTGTAAAAATTGGAAAG	amplication of *orf463a*
NOSR	AACTGCAGGTTTCTTAAGATTGAATCCT	amplication of NOS sequence
NOSF	CCCAAGCTTCCCGATCTAGTAACATAGA	amplication of NOS sequence
VNOF	GGGGTACCAGCCTGGGGTGCCTAATGAGT	amplication of 35S promoter
VNOL	CGGGATCCGGTCGATCGACAGATCTGCGA	amplication of 35S promoter
q-orf463a-F	ACACAGCCGCCATATCAATTTTCG	qRT-PCR
q-orf463a-R	CGGTCATTGTCCTGACGGTTCTG	qRT-PCR
q-TUB2-F	ATCCGTGAAGAGTACCCAGAT	qRT-PCR
q- TUB2-R	AAGAACCATGCACTCATCAGC	qRT-PCR
NOS-F	GTATTTGTTTAGGCTCCGGC	Verification of transgenic positive plants
NOS-R	CAAGACCGGCAACAGGATTCAATC	