

Table S2a Comparison of repeat sequences on *A.tanguticus* and five related species.

Species	type	30-39bp	40-49bp	50-59bp	>60bp
<i>N.tabacum</i>	F	17	1	0	0
	P	13	2	1	1
	C	0	0	0	0
	R	1	0	0	0
<i>D.stramonium</i>	F	12	1	0	0
	P	10	1	1	1
	C	0	0	0	0
	R	0	0	0	0
<i>H.niger</i>	F	14	7	2	0
	P	11	7	3	1
	C	0	0	0	0
	R	0	0	0	0
<i>A.tanguticus</i>	F	16	2	0	0
	P	13	3	1	1
	C	0	0	0	0
	R	3	0	0	0
<i>P.tangutica</i>	F	19	3	1	0
	P	14	5	0	2
	C	0	0	0	0
	R	2	0	0	0
<i>S.parviflora</i>	F	15	4	0	0
	P	13	5	1	1
	C	0	0	0	0
	R	1	0	0	0

Note: F: forward repeats; C: complement repeat; R: reverse repeat; P: Palindromic repeat.

Table S2b Distribution of SSRs in the *A.tanguticus* cp genome.

SSR type	Unit	Times	Numbers of SSR
P1	A	8	27
	A	9	5
	A	10	5
	A	11	3
	A	12	4
	A	13	1
	A	17	1
	C	8	2
	G	9	1
	T	8	27
	T	9	19
	T	10	8
	T	11	7

P2	T	12	2	
	T	13	1	
	T	14	2	
	T	15	1	
	T	16	2	
	T	17	2	
	AT	5	3	
P3	AT	6	1	
	TA	5	3	
	TA	6	1	
	AAC	3	2	
	AAG	3	4	
	AAT	3	5	
	AGA	3	3	
	ATA	3	3	
	ATC	3	1	
	ATG	3	1	
	ATT	3	3	
	CAA	3	1	
	CAG	3	2	
	CCT	3	1	
	CTC	3	1	
	CTG	3	1	
	CTT	3	2	
	GAA	3	2	
	GAG	3	1	
	GAT	3	1	
	GCT	3	1	
	GGA		3	1
	GTA		3	1
	GTG		3	1
	GTT		3	1
	TAA		3	5
	TAT		3	4
	TCG		3	1
	TCT		3	3
	TGA		3	1
	TGC		3	2
	TGG		3	1
	TTA		3	5
	TTA		4	1
	TTC		3	4
	TTC		4	1
	TTG		3	5

P4	AAAC	3	1
	AAAT	3	1
	CAAA	3	1
	CTAT	3	1
	TTCT	3	1
	TTTA	3	1
	TTTG	3	1
P5	AATTG	3	1
