

Supplementary Material: *Crop & Pasture Science*, 2018, **69**, 362–373.

Chloroplast structure and DNA methylation polymorphisms in an albino mutant of wheat (*Triticum aestivum*) cv. Xinong 1376

Yulong Song^{A,C,D,E,F,G,*}, Huali Tang^{A,D,E,F,G,*}, Xiangsheng Ke^A, Jialin Guo^{A,D,E,F,G}, Shuangxi Zhang^B, Junwei Wang^{A,D,E,F,G}, Na Niu^{A,D,E,F,G}, Shoucai Ma^{A,D,E,F,G}, Huiyan Zhao^{A,H,I} and Gaisheng Zhang^{A,D,E,F,G,I}

^ACollege of Agronomy, Northwest A&F University, Yangling, Shaanxi 712100, China.

^BCrop Institute of Ningxia Academy of Agricultural and Forestry Science, Yongning, Ningxia 750105, China.

^CState Key Laboratory of Crop Stress Biology for Arid Areas, Yangling, Shaanxi 712100, China.

^DNational Yangling Agricultural Biotechnology and Breeding Center, Yangling, Shaanxi 712100, China.

^EYangling Branch of State Wheat Improvement Center, Yangling, Shaanxi 712100, China.

^FWheat Breeding Engineering Research Center, Ministry of Education, Yangling, Shaanxi 712100, China.

^GKey Laboratory of Crop Heterosis of Shaanxi Province, Yangling, Shaanxi 712100, China.

^HCollege of Plant Protection, Northwest A&F University, Yangling, Shaanxi 712100, China.

^ICorresponding author. Email: zhanggsh58@aliyun.com, zhaohy@nwsuaf.edu.cn

*These authors contributed equally to this work and should be considered co-first authors.

Supplementary Table 1

Table 1S BLAST results of the DNA methylation polymorphic fragments during different color leaves in wheat

Fragment Name	Length	Primer Combination	Change Class		Identification	Sequence Homology
			G-R	G-W		
1	267	EK I -1/EK II -2	A3	B4	EMS68813.1	Wall-associated receptor kinase 4
2	170	EK I -1/EK II -3	C4	C4	ABA95110.1	Retrotransposon protein, putative, Ty1-copia subclass
3	173	EK I -1/EK II -5	B4	B4	WP_025706653.1	NUDIX domain-containing protein
4	129	EK I -1/EK II -5	C4	C4	XP_022610358.1	F-box/LRR-repeat protein 13
5	173	EK I -1/EK II -5	B4	B4	WP_025706653.1	NUDIX domain-containing protein
6	151	EK I -1/EK II -8	B4	B4	EMS57630.1	Hypothetical protein TRIUR3_29634
7	129	EK I -1/EK II -9	B4	B4	XP_018076666.1	Putative MFS multidrug transporter
8	99	EK I -1/EK II -10	B4	B4	XP_018661600.1	Endonuclease/exonuclease/phosphatase family
9	124	EK I -1/EK II -16	B4	B4	XP_004514963.1	Transcription factor GTE9-like
10	149	EK I -2/EK II -2	B4	B4	XP_020154674.1	17.5 kDa class II heat shock protein-like
11	190	EK I -2/EK II -3	C4	C4	XP_020195251.1	Uncharacterized protein LOC109781085
12	213	EK I -2/EK II -3	C5	C5	EMS55095.1	Hypothetical protein TRIUR3_25163
13	240	EK I -2/EK II -4	B5	B5	XP_020164560.1	Actin cytoskeleton-regulatory complex protein PAN1-like
14	384	EK I -2/EK II -4	B4	B4	AGT17357.1	Cytochrome P450 monooxygenase
15	269	EK I -2/EK II -10	C4	C4	EMS67606.1	Hypothetical protein TRIUR3_19064
16	327	EK I -2/EK II -12	B5	B5	ARS45120.1	SHR
17	237	EK I -2/EK II -15	B5	B5	WP_037562914.1	PTS N-acetylgalactosamine transporter subunit IIA
18	267	EK I -2/EK II -15	C4	C4	EMS67748.1	Tropinone reductase-like protein
19	123	EK I -3/EK II -5	C4	C4	XP_020198654.1	Aspartyl protease family protein At5g10770-like
20	168	EK I -3/EK II -6	B4	B4	XP_018412653.1	Pre-rRNA-processing protein TSR1 homolog isoform X1
21	213	EK I -3/EK II -7	B4	B4	XP_020196879.1	BTB/POZ and MATH domain-containing protein 1-like
22	102	EK I -3/EK II -13	B1	B1	ABB47013.1	Retrotransposon protein, putative, Ty3-gypsy subclass
23	126	EK I -3/EK II -13	B1	B1	EMS48902.1	DEAD-box ATP-dependent RNA helicase 40
24	279	EK I -4/EK II -2	B4	B4	XP_010212753.1	Structural maintenance of chromosomes protein 2
25	151	EK I -5/2	B4	B4	CDB33004.1	Putative uncharacterized protein
26	660	EK I -5/EK II -7	B4	B4	NP_114259.1	Photosystem I P700 chlorophyll a apoprotein A1(Psa A)

27	240	EK I -5/EK II -10	B4	B4	WP_009658785.1	NAD-dependent protein deacylase
28	180	EK I -5/EK II -12	C4	C4	XP_020180462.1	Separase isoform X2
29	176	EK I -6/EK II -1	C4	C4	EMS49720.1	Serine/threonine-protein kinase CBK1
30	402	EK I -6/EK II -5	B5	B5	ASI02376.1	Photosystem I P700 chlorophyll a apoprotein A1(PsaA)
31	114	EK I -6/EK II -10	B5	B5	XP_020189868.1	Uncharacterized protein LOC109775544
32	227	EK I -6/EK II -11	C1	C1	BAB33421.1	Putative senescence-associated protein
33	112	EK I -6/EK II -15	B2	B2	XP_020189593.1	Uncharacterized protein LOC109775256
34	136	EK I -6/EK II -15	B4	B4	WP_027285650.1	Sodium-dependent transporter
35	231	EK I -6/EK II -16	B1	B1	WP_037129328.1	LytR family transcriptional regulator
36	129	EK I -7/EK II -4	B4	B4	XP_020156769.1	Uncharacterized protein LOC109742104
37	162	EK I -7/EK II -4	B5	B5	WP_007604254.1	Methyl-accepting chemotaxis protein
38	155	EK I -7/EK II -9	C4	C4	EMS52744.1	Expansin-A32
39	317	EK I -7/EK II -14	B5	B5	XP_014752168.1	Uncharacterized protein K02A2.6-like
40	299	EK I -7/EK II -14	B5	B5	ABA95343.1	Retrotransposon protein, putative, Ty3-gypsy subclass
41	350	EK I -8/EK II -6	A2	C1	BAB33421.1	Putative senescence-associated protein
42	342	EK I -8/EK II -7	C4	C4	XP_020185774.1	Uncharacterized protein LOC109771494
43	795	EK I -8/EK II -9	B5	B5	CCQ48570.2	Photosystem I P700 chlorophyll a apoprotein A1(PsaA)
44	113	EK I -8/EK II -14	B2	B2	XP_020189593.1	Uncharacterized protein LOC109775256
45	237	EK I -9/EK II -3	C4	C4	EMS45135.1	Pre-mRNA-processing factor 6
46	193	EK I -9/EK II -6	B3	B3	EMS48413.1	LRR receptor-like serine/threonine-protein kinase GSO1
47	232	EK I -9/EK II -7	B4	B4	XP_020181373.1	putative cyclin-dependent kinase F-2
48	188	EK I -9/EK II -9	C4	C4	EMS47702.1	BTB/POZ and MATH domain-containing protein 3
49	146	EK I -9/EK II -10	C4	C4	WP_074588090.1	AraC family transcriptional regulator
50	112	EK I -9/EK II -14	A3	C4	XP_020189229.1	Uncharacterized protein LOC109774872
51	259	EK I -9/EK II -14	B4	B4	AKN60098.1	Photosystem II D2 protein (PsbD)
52	111	EK I -10/EK II -1	A2	C1	PIM04348.1	Hypothetical protein TGCOUG_250905
53	211	EK I -10/EK II -8	C4	C4	WP_080684680.1	Hypothetical protein
54	195	EK I -10/EK II -14	B4	B4	XP_012945196.1	Carbonic anhydrase-related protein 11-like
55	516	EK I -11/EK II -1	B2	B2	XP_020164192.1	Uncharacterized protein LOC109749653
56	209	EK I -11/EK II -7	C3	C3	XP_021746410.1	Transmembrane 9 superfamily member 10-like
57	563	EK I -12/EK II -2	C4	C4	XP_020170019.1	Uncharacterized protein LOC109755535
58	285	EK I -12/EK II -4	B4	B4	KNC20779.1	Hypothetical protein FF38_00111
59	417	EK I -12/EK II -9	C4	C4	XP_021005348.1	UDP-glucuronosyltransferase 1-5 isoform X4

60	131	EK I -13/EK II -3	C4	C4	OUS06970.1	Hypothetical protein A9Q96_08360
61	197	EK I -13/EK II -5	B4	B4	XP_020182015.1	Uncharacterized protein LOC109767702
62	417	EK I -13/EK II -6	A1	C5	XP_020184664.1	Uncharacterized protein LOC109770372
63	661	EK I -13/EK II -7	B4	B4	CCQ48570.2	Photosystem I P700 chlorophyll a apoprotein A1(PsaA)
64	341	EK I -13/EK II -10	C4	C4	EMS68764.1	LRR receptor-like serine/threonine-protein kinase GSO1
65	267	EK I -13/EK II -10	C4	C4	OQY58203.1	PAS domain-containing sensor histidine kinase
66	108	EK I -14/EK II -5	C4	C4	OFW31989.1	Transcription elongation factor GreA
67	109	EK I -14/EK II -6	C4	C4	WP_012993430.1	Nif3-like dinuclear metal center hexameric protein
68	93	EK I -14/EK II -8	A3	B4	XP_020155624.1	Heme oxygenase 1, chloroplastic-like
69	114	EK I -14/EK II -10	B1	B1	NP_817176.1	ORF53c
70	115	EK I -14/EK II -11	C1	C1	NP_817176.1	ORF53c
71	515	EK I -14/EK II -12	C1	C1	ABF95975.1	Retrotransposon protein, putative, Ty3-gypsy subclass
72	155	EK I -14/EK II -13	B4	B4	OVA01004.1	WD40 repeat
73	204	EK I -14/EK II -16	C5	C5	XP_020179014.1	F-box protein PP2-B1-like
74	175	EK I -16/EK II -3	B2	B2	KRX88454.1	Hypothetical protein T12_14211
75	151	EK I -16/EK II -11	B3	B3	XP_020182083.1	Uncharacterized protein LOC109767769
76	268	EK I -16/EK II -12	C3	C3	XP_004247417.1	Small nuclear ribonucleoprotein Sm D2
77	175	EK I -16/EK II -15	B5	B5	KRX88454.1	Hypothetical protein T12_14211

Supplementary Sequence

The sequence of sample 1,as following(EK I -1/EK II -2):

GACTGCGTACCAATTCAAGGACAGCCAGTGGTAAGTGCAGGGCTCGCCCTGCATTTAAGAGAA
GCGGGATGTACGGAGGCTTAACCACCCACCGATATTCAACGAACAATGCCGTCGATGGCATGGATGTT
GCTGCTATTGCCATTAGCTGCATGGGCAACCACTGTCTCTAGCTCCTTGGTGGCGAAGCCAGGCTGCC
AGGCCCGATGCGGCGGCATCGACGTCCCCTACCCGTTCCGGCATAGGTACCGAGCAGGACTCATGATA

The sequence of sample 2,as following(EK I -1/EK II -3):

ATCATGAGTCCTGCTCGGTATGGACATGCTCTTCAACATGCATCTGGCCATCTCTACCACAGTTTG
GTTCCGCCGCTCTACCACACCATTTTGGCTGAGGTGAGTAAGGAGCCGTGGTGTAGTGCTTGACACCGA
TCTCCTTGCAGTACGCCTTGAATTGGTACGCAGTCA

The sequence of sample 3,as following(EK I -1/EK II -5):

GACTGCGTACCAATTCAAGGGAAGAGAGATTAACAAGGAGCAGACACGTTAGCCCTTAGCCTCT
CTCCCGTGGCCTATGCCCCGTAAGGAGCAGACACGTACGTAAGACGCGACTACAATTTACTCGACTAT
GGCAAGTGCCCCTGACCCACGACCGAGCAGGACTCATGATA

The sequence of sample 4,as following (EK I -1/EK II -5):

GACTGCGTACCAATTCAAGTAAATGACCACACACGCTCATATTATTGAAATGGCAACACACACAC
ACCATGCACGCACGCACGCACGACAAGATGGGCACGACCGCGACCGAGCAGGACTCATGATA

The sequence of sample 5,as following(EK I -1/EK II -5):

GACTGCGTACCAATTCAAGGGAAGAGAGATTAACAAGGAGCAGACACGTTAGCCCTTAGCCTCT
CTCCCGTGGCCTATGCCCCGTAAGGAGCAGACACGTACGTAAGACGCGACTACAATTTACTCGACTAT
GGCAAGTGCCCCTGACCCACGACCGAGCAGGACTCATGATA

The sequence of sample 6,as following(EK I -1/EK II -8):

GACTGCGTACCAATTCAAGGCATTCAATCTCACCGGGCGACAGCGTCCTCGGCGGCGGGCCCT
ATGGAGCTCAGTCCGACATAGGGAAGAAGCGGAGGCTGAGGGTCTTGATAGCGCACTTGCCTGGA
CCGAGCAGGACTCATGATA

The sequence of sample 7,as following(EK I -1/EK II -9):

ATCATGAGTCCTGCTCGGTGGCATAGCGTGGGCGTGGCCCTTGGGAGAGAGAGACGAGTCATG
CGGGCTGCTCTAGTGCTTGGTGGCGGCTGCTCCTGACCATCGCGCTTGAATTGGTACGCAGTCA

The sequence of sample 8,as following(EK I -1/EK II -10):

GACTGCGTACCAATTCAAGGCTTGCCCCATCCGAACATCCACCCCGTTCCACCCTCGATGGACTC
CCGCGATCCGCCACACCGAGCAGGACTCATGATA

The sequence of sample 9,as following(EK I -1/EK II -16):

GACTGCGTACCAATTCAAGAGTCGTAAGCGCGATGTGCCAGGACAAAGAGGAGCGATGGGAAT
CCCCTCACGGTTCTCCCTCTAGCCATCCTCCTCCACGTAACCGAGCAGGACTCATGATA

The sequence of sample 10,as following(EK I -2/EK II -2):

TGACTGCGTACCAATTCAACAAGCAATCCAACCCGTGGAGATCAATCACAATCACCGAGCGAGAA
TGGAGGACAGGATGTTTCGGACTGGAGACCCCGCTGATGACGGCGCTGCAGCACCTGCTGGACGTACC
GAGCAGGACTCATGATA

The sequence of sample 11,as following(EK I -2/EK II -3):

GACTGCGTACCAATTCAACCGCTGCCATCTGTGCGTCGGCAATTTTGAACCTTTCTAGAAACATT
CTTCTGCTTTCTGCCGATTGCCAGTGGCTGTAATCACACCTTTGGGGCCAGACATCTTCAGCTTGAGGT
ACACATAACACGGTTGAGCAATGAAACGTGCGTATACCGAGCAGGACTCATGATA

The sequence of sample 12,as following(EK I -2/EK II -3):

GACTGCGTACCAATTCAACGAGCAAATATGGAGCAGGAAGGAGGATTGTGATGCTGCTGTTTCAT
GGGTGCTCAGAAGAACCATTAGCTGGATAAGCTACTTCCCCTCAAACAAGGGATGGGCGGAGTGCC
CCTGATGCTATTGTTACTAGGATTGGCTGAGGACAATAATGTGTTGTTTCCTGATGGCAGATACCGAGCA
GGACTCATGATA

The sequence of sample 13,as following(EK I -2/EK II -4):

GACTGCGTACCAATTCAACAGAGAGGGGAAAATCACGGCAAAGCTGGCGAACTGAAAGTAGATT
CTTGACGAGAGAAGGAGAAACGAGGATATTGCGAAGAGGAATAGGGGATGTGCTGGTGATCAGCGAG
CTAGTGCCAACATGGGTGATGGGCAGGCGCTCGCCACTGCCGACGATGATGCATGCATCAGTAGAGGA
CGGGCGAGCAGAGAGAAGATTACCGAGCAGGACTCATGATA

The sequence of sample 14,as following(EK I -2/EK II -4):

GACTGCGTACCAATTCAACCAAGCGCGGGTAAACGGCGGGAGTAACTATGACTCTCTTAAAGGTAG
CCAAATGCCTCGTCATCTAATTAGTGACGCGCATGAATGGATTAACGAGATTCCCCTGTCCCTGTCTA
CTACCCAGCGAAACCACAGCCAAGGGAACGGGCTTGGCGGAATCAGCGGGGAAAGAAGACCCTGTT
GAGCTTGACTCTAGTCCGACTTTGTGAAATGACTTGAGAGGTGTAGGATAAGTGGGAGCCCTCACGGG
CGCAAGTGAAATACCACTACTTTTAACGTTATTTTACTTATTCCTGGGTCGGAAGCGGGGCATGTCCC
CTCCTTTTGGCTCCAAGGCCCGTCTTACCGAGCAGGACTCATGATA

The sequence of sample 15,as following(EK I -2/EK II -10):

ATCATGAGTCCTGCTCGGTGTACACCTCCGAGTGGGCAAAGTACGAGACCACGAAGAATCTACTC
TCTTGCTCCCACACGAAGGATTGACAATGGCGAATCTCGTCGTGCTGATTGATACTCTGTTACTTGTG
CAGATGGTTGGCTGAGCAGAAGAAGATGGCGAATGTGACGCCTGATCCCCTGTGTGAGTAGCACTG
AAATTAGTTCGTCTGAACATTTTCGCTGAAGCTTTCAGCTGTTTCGGGCTGTTGAATTGGTACGCAGTCA

The sequence of sample 16,as following(EK I -2/EK II -12):

TGACTGCGTACCAATTCAACCCATGGTCGGCTTGACCGATCACCTTCGATCGTAGGGACCACCCG
GCCAGCATCCGTCATGGATGTTTCGGGAGCCCTGGTCCTCGATCCAATTATCGACGGATAACCATCTCACT
CGAGTCCTTATGGACGGCGGCAGCATTCTAACCTGATCTATCAAGACACTGTCCATAAAATGGGTATT

GATCCGTCAAGAATCAAGCCTAGTAACACCACCTTTAAAGGAGTGATACCCGGCGTAGAGGCCCGCTG
CACGGGTTTCATTAACATTGGAAGTAGTCTTCGGTTCACCGAGCAGGACTCATGATA

The sequence of sample 17,as following(EK I -2/EK II -15):

ATCATGAGTCCTGCTCGGTTCTTATATGATCCTGTCAATCCTTAACCCTGCGGAGCAGTGGTACTGC
ATAGGCATTTTGCTAAGCAGATGAATGTCGTGTGGGGTCGATAACACACAAGCAGATCATGTGTCGCG
GGTAATACTGGTAGCCATCGGAACATACTGGACTGGCAGAACCTGATGTGGTATGAATACTCCACC
ACTGACGACGACGGTTGAATTGGTACGCAGTCA

The sequence of sample 18,as following(EK I -2/EK II -15):

ATCATGAGTCCTGCTCGGTTCAACCACTCGATGGTCTTAGAGCATCTCTAGCCGTTGGCCTCTTAG
GAGGCATAAAAATCGCCGCTAGGGGCGAGCCGGCGGTAGAATCGGCATTGGGGTGGTTGGGCATCC
AGCCGTCGCCCCAGTCGTCGATATCGGTCCATTTCGCGCCGCTTTTCGGCCCAGATAAATAGAAAAAT
GGTCCGATATTGGTGAGAAACGGCCATATTCGGCGTGATTCGGCGTTGAATTGGTACGCAGTCA

The sequence of sample 19,as following(EK I -3/EK II -5):

TGACTGCGTACCAATTCAATAGCTGCTAACTTATCTACACCTTGTGCAGGAGATGGCAATGGACTG
GCTGTGACGCATCGGCTGAGCCCGTCTCTCCTCCGACCGAGCAGGACTCATGATA

The sequence of sample 20,as following(EK I -3/EK II -6):

ATCATGAGTCCTGCTCGGTTCTCGACATCCTGTTGCCGTGGTGGTGGACTTTTCTAGGATCGGTT
TGATCGGTTGAGGGGCGGGCGCGGTTGGTTCGATCGGTTCTGGAAGTCTGGATGTCCAGGTTTCGTA
ATAAGCCTGTGCAATTGAATTGGTACGCAGTCA

The sequence of sample 21,as following(EK I -3/EK II -7):

ATCATGAGTCCTGCTCGGTCAGGAGAATGACGACATGGTTAAGCATTACTGGTGGCCGCAGATC
GGTATGCCATGGAAAGAATGAAGATGATATGTGAAGCCACTCTCTGCAAAAGTCTTACTGTGCGAGACT
GTCGCATCCACGTTAGCTCTGGCTGATCAGTATCATTGCAGCGGGCTCAAAGATGCTTGCATTGAATTG
GTACGCAGTCA

The sequence of sample 22,as following(EK I -3/EK II -13):

GACTGCGTACCAATTCAATCGGCAGCTGGGAAAACCTGGAGGACGCATTCCCTCGACAACTTTCAG
GGAACATGCGTGCGACAACCGAGCAGGACTCATGATA

The sequence of sample 23,as following(EK I -3/EK II -13):

TGACTGCGTACCAATTCAATCCGGATGAGCACCAAACCTTGGAAAGGCTCTTCGAGACCACGCAC
GAAGATATCTGGAAGGTGCTCTTCAAGGGCAACGAGACGCAACCGAGCAGGACTCATGATA

The sequence of sample 24,as following(EK I -4/EK II -2):

GACTGCGTACCAATTCAAAGGGCATAAGTTCAAGAAGAGATCTGTGAAGATTGAGGAGGGAGAG
CACCCACCTTTGGTGCAAGTGATGTTGAGGGAGTAAGCCAACCACAAATCCACCACCGCATGCTGGA
ACTTCCTCTCCATATTTCCATCTGCGGGAAGCGACCGAAGAAGCAGGGCCCCGACGGAGGCCAAAGG

ACTTCTGCGGGGCGGAGAAGGAGGGGAGACCGTTCGATGGAACCGACAGAGGCGGCCGCGGTACCGA
GCAGGACTCATGATA

The sequence of sample 25, as following (EK I -5/EK II -2):

GACTGCGTACCAATTCAGTACATCAGGACACTAGGAGGACGGCGAGGAGCAATGACGATGATAG
AGCGGGGGTGGTCGGCGATGGCAGCAGAGCATGGGGATGGTTGTGCGTTGGCTAAGATGAACGTTTT
ACCGAGCAGGACTCATGATA

The sequence of sample 26, as following (EK I -5/EK II -7):

GACTGCGTACCAATTCACGAGGAAGTGGTATCTCTTTAGGATCCACCCCAGCGTCAAGAAATTGG
TTAATTGGTAAAGATACATGAATTTGGTGCCCCGCCAAGAAAGAGACCCAAGTCTAATAATCCCCT
AAGTGGTGATTCAACATGGATTCTACATCTTGGAAACCAGGCCAATTTGGGAGCGGCTTTGTGATAATGG
AACCAACCAGCAAAAAGCATTAAACGCTGCAAAAATCAATGCACCAATTGCAGTACAATAGAGTTGTAA
TTCCTAGTTATTCCAGATGCTCGCCAAAGCTGAAAAAAACCAGAGGTTATTTGGATTCCCTCGGAAAC
CCCCGCTACATCACCATTCAATATTTCTTGCCCTACTATAGGCCAAACTACCTGAGCACTGGGTCCAAT
GTGAGTAGGATCACTTAGCCATGCTTCATAATTAGAAAAACGGGCGCCATGAAAGTACATGCCACTCA
ACCAAAGAAAGATAATGGAAAGTTGCCCCGAAATGAGCACTACAGACTTTTCGAGAAATCTCCTCCAAA
TCACCAGTATGACTATCGAGATCGTGAGCATCAGCATGTAGGTTCCAGATCCAAGTGGTAGTATCAGGG
CCCTTAGCTAGTGTCTTGAGAAATGACCGAGCAGGACTCATGATA

The sequence of sample 27, as following (EK I -5/EK II -10):

GACTGCGTACCAATTCACGGATGCTCGGTTGTCTGAATCGCAGCGAGTTGACCATGCAGTGGGA
AAGTTGCCGAGAAAGGCCGGAAGTACTATATATGAGCGACGGATGAACATAATGGGATGCAATCATC
ATGAAAGCATCAAGAATGCCTCTATTGAATACCCAGTCAACCTCTGTACAGATATTGCAGGCAGTATCT
TGCCTGGGCTTCTGTGACACCGAGCAGGACTCATG

The sequence of sample 28, as following (EK I -5/EK II -12):

TGACTGCGTACCAATTCACGGACAAGATCAGCGTCGAAAAATGAAGACTCGGCAGCCAGGGAAA
TGGCACAGCGGCTCAGTGCATTACAAGCAGAGTCACATACTTCTTGCTCGCCTCCTCAGTTGGAATC
CTGCAACCGCACAAAGCAAGGTTATCTACCGAGCAGGACTCATGATA

The sequence of sample 29, as following (EK I -6/EK II -1):

TGACTGCGTACCAATTCACCTACCAGCCCCTCGAGGACAAGATTGCAGGTCAGCTCACCCCTTGGG
TGGGAAGGCACATTGCCTCGGCAGGTCGGGCAGTCTTGGTTAAGTCGGTCCTCACGACGATTGCTATC
TACTACATGACGGCGTTAGATCTACCGAGCAGGACTCATGATA

The sequence of sample 30, as following (EK I -6/EK II -5):

GACTGCGTACCAATTCACCTAGTTATTCCAGATGCTCGCCAAAGCTGAAAAAAACCAGAGGTTATT
TGGATTCCCTCGGAAACCCCGCCTACATCACCATTCAATATTTCTTGCCCTACTATAGGCCAAACTACCT
GAGCACTGGGTCCAATGTGAGTAGGATCACTTAGCCATGCTTCATAATTGAAAAACGGGCGCCATGA

AAGTACATGCCACTCAACCAAAGAAAGATAATGGAAAGTTGCCCGAAATGAGCACTAAAGACTTTTC
GAGAAATCTCCTCCAAATCACCAGTATGACTATCGAAATCGTGAGCATCAGCATGTAGGTTCCAGATCC
AAGTGGTAGTATCAGGGCCCTTAGCTAGTGTCTTTGAGAAACGACCGAGCAGGACTCATGATA

The sequence of sample 31,as following(EK I -6/EK II -10):

GACTGCGTACCAATTCACCTTTGCCGCTCCAACAATGTGGCCGAGTACGAGGCGCTCATATACGG
GCTCCGGCTAGCCAAAGAGCTCGGCATACACCGAGCAGGACTCATGATA

The sequence of sample 32,as following(EK I -6/EK II -11):

TGACTGCGTACCAATTCACCTAAGTGTGGATTGTTACCCACCAATAGGGAACGTGAGCTGGGTTT
AGACCGTCGTGAGACAGGTTAGTTTTACCCTACTGATGACAGTGTGCGGATAGTAATCAACCTAGTAC
GAGAGGAACCGTTGATTCACACAACCTGGTCATCGCGCTTGGTTGAAAAGCCAGTGGCGCGAAGCTAC
CGTGCACCGAGCAGGACTCATGATA

The sequence of sample 33,as following(EK I -6/EK II -15):

GACTGCGTACCAATTCACCTAAGTGGGCCGAAGTAGAAGCTGTCTGCACCATCCCGGCTCGCTCAG
TAGTCAAGTTCATCAGGGGCCCTCGTGAACCGAGCAGGACTCATGATA

The sequence of sample 34,as following(EK I -6/EK II -15):

GACTGCGTACCAATTCACCTCGACGAAAGGCCTGGAGTGGAGCAAGGCGACTGAAAGAGGTTGAT
GACGTCATCCGTGACGGTTGGCCCAAGACGAGGCGCTCACGTAGCCCAAAGAACCGAGCAGGACTCA
TGATA

The sequence of sample 35,as following(EK I -6/EK II -16):

TGACTGCGTACCAATTCACCTGGTAACTCCGCGGGTGCAGCAGCTGCAGGTGCCACCGTTGCTCTC
CGTCAACCTCAAAGGTCTGCCTAACAAATCACGATTCGTTTGTCTTCTATATCCATTATTCATTGATTG
TTGAGAGTATGTAGAATAGCAGAGCACGCGTAGCTTTCGGTGTGACGAACATATTCTACCAGTTCTCA
TACGTAACCGAGCAGGACTCATGATA

The sequence of sample 36,as following(EK I -7/EK II -4):

GACTGCGTACCAATTCACAATGCAAGAACCAATTAGACAATGGAGCGCTTGTCTGTTGGATTAC
CTCGATCGCCAGTGCTGGGGACGACGGGCGCGGGCTGAGTTACCGAGCAGGACTCATGATA

The sequence of sample 37,as following(EK I -7/EK II -4):

GACTGCGTACCAATTCACAAAGCGATTAATCACTATTCACCCACCTAGCAAGCGCTCCCCACACG
GCATTGTAICTGCTTTGAGGAGACAGGTCGCTGGCACGAACGGCCTCTTGCTTCTACCTTGGTTAAG
ACATGCCTTACCGAGCAGGACTCATGATA

The sequence of sample 38,as following(EK I -7/EK II -9):

TGACTGCGTACCAATTCACACCTGGCTGGCTAGCACGATCTTACAGGGTGGTTAGAAGTTCTTGG
GTGCTGTTAGGTGACACCAAACCTGCCAGTCCCGCGGGAGGACGTGCCAGGACGTGTGCTTGCGATG
GCCACCGAGCAGGACTCATGATA

The sequence of sample 39,as following(EK I -7/EK II -14):

ATCATGAGTCCTGCTCGGTTTCCGTTGTAAAGGGACCATAAGCCGGGGTTTCAGACCTTTCAGGAT
TTCCTGATTGGCTCTTTCAGCTTGACCATTGGATTGAGGATGAGCCACTGAGGAAACATCAAGTCGGAT
ATGCTCTCATTGACAAAACCTTCCATAGCGCCTTTGGAGATATTGGTGCCATTGTCAGTTATAATGTTG
TGCGGAAAACCAAAGCGGAAAATCACCTTTTTTCATAAATTGAACCGCCGTGGCTGCATCGCACTTGCT
AACTGGCTCAGCTTCAACCACTTTGTGAATTGGTACGCAGTCA

The sequence of sample 40,as following(EK I -7/EK II -14):

TGACTGCGTACCAATTCACAAGTGCTTGAGACTTGATGGTTGTCCGAGGCATGATTTCAACACAT
GAGGTCCAAGCACAATGGCCCACTTGGAACCCGACCTGTGGCTTCACTGTTTTGAATAATATCCCCTA
AAGGAGAAGAACTGACTACAGTGATGGGATGACCAAAGAAATACTGCCTCAGCTTACGACTAGCCAT
GAACACTCCATACACAGTTTCTGCCAATGTGGATTCTCTGCTTGGATTCAATGAGGACCTCTCTAAT
TATAATAAACCGAGCAGGACTCATGATA

The sequence of sample 41,as following(EK I -8/EK II -6):

TGACTGCGTACCAATTCACCAAGTGTGGATTGTTACCCACCAATAGGGAACGTGAGCTGAGTT
TAGACCGTCGTGAGACAGGTTAGTTTTACCTACTGATGACAGTGTGCGGATAGTAATTCAACCTAGTA
CGAGAGGAACCGTTGATTCACACAATTGGTCATCGCGCTTGGTTGAAAAGCTAGTGCGCGAAGCTAC
CGTGTGCCGGATTATGACTGAACGCCTCTAAGTCAGAATCCAAGCTAGCATGCGACGCCTGCGCCCCG
CGCCCCCCCCGACCCACGTTAGGGGCGCTTGCGCCCCCAAGGGCCCGTGCCATTGGCTAGACCGAGC
AGGACTCATGATA

The sequence of sample 42,as following(EK I -8/EK II -7):

TGACTGCGTACCAATTCACCAAATGGATTGGAGCGAAGCCAATCAAAAAGCTCAACGGTCCA
GCTATGACCCTCATCACAGATGTCACCGTCCGGTACGACATACCACACAGCATCATCACCGACAACGGT
ACAAACTGTGCCAAAGGCGCCTTGGCTCGTTTTCTGCGTGATGCAGGGCATTGTCTATACTTAGCGTCC
GTTGCCACCCCGCGTCAAACGGCCAAGTCGAGTGAGCAAATGGCCTCATCTTATCTGGCATCAAGCC
TCGCTGATCGAGCCACTAGAGCAATCAGCCGAGTGCTGGATCGACGAGCCACCGAGCAGGACTCAT
GATA

The sequence of sample 43,as following(EK I -8/EK II -9):

ATCATGAGTCCTGCTCGGTCACTGGATCTAGTCTCCGCGAAAAGTCAGAAATTCTGCGTATTTGG
ACCAATTTAAAGTGAAAAAAGGGGTTGCTCCTTCGGCAAAACTAGGATAAAGTTGAGCCAAAAGGTC
CCGATTCAAGATAAATTCATGAGGAAGTGGTATCTCTTTAGGATCCACCCAGCGTCAAGAAATTGGTT
AATTGGTAAAGATACATGAATTTGGTGCCCCGCCAAGAAAGAGACCCAAGTCCTAATAATCCCCTA
AGTGGTGATTCAACATGGATTCTACATCTTGAACAGGCCAATTTGGGAGCGGCTTTGTGATACTGGA
ACCAACCAGCAAAAAGCATTACGCTGCAAAAATCAATGCACCAATTGCAGTACAATAGAGTTGTAAT
TCACTAGTTATTCCAGATGCTCGCCAAAGCTGAAAAAACCAGAGGTTATTTGGATTCTCGGAAACC

CCCGCTACATCACCATTCAACATTTCTTGCCCTACTATAGGCCAAATTACCTGAGCACTGGGTCCAAT
GTGAGCAGGATCACTTAGCCATGCTTCATAATTGGAAAAACGGGCGCCATGAAAGTACATGCCACTCA
ACCAAAGAAAGATAATGGAAAGTTGCCCGAAATGAGCACTAAAGACTTTTCGAGAAATCTCCTCAA
ATCACCAGTATGACTATCGAAATCGTGAGCATCAGCATGTAGGTTCCAGATCCAAGTGGTAGTATCAGG
GCCCTTAGCTAGTGTCTTGAGAAATGACCGAGCAGGACTCATGATA

The sequence of sample 44,as following(EK I -8/EK II -14):

TGACTGCGTACCAATTCACCAAATGGGCAGAGGTGGATGCCATCCGCACCATCCCAGCCGGGTGCG
GCAGTTAAGTTCATCAAGGGCCTCGTAAACCGAGCAGGACTCATGATA

The sequence of sample 45,as following(EK I -9/EK II -3):

TGACTGCGTACCAATTCAGGGGATGGGGCGATCTCGGGGATGGACTGCCCTAGGAGCTAGTGATC
CCGCCAGAACCTGCGAGAATTGCCGTCGCGAGTCCAAGTTGTGGAGGCGTGAGAATTGGCTTGTGT
CACGATCGTTGGGTAAGTGGACGTTCCGCCAAGGCCGATCGGGGTCCATAGCTTGTAGCCAAAGCCAA
CTGGTTTGCAGCGTAATACCGAGCAGGACTCATGATA

The sequence of sample 46,as following(EK I -9/EK II -6):

GACTGCGTACCAATTCAGGCCCGAAAGTTGAGGTACCGCAGATTGCCAAGAGACCCTAAGAAG
CCTGGCAGGCGGCCTCGACGCCCGGTGAGATGGTAATCCCCGCCAAGGTCGAGGTGTTGCAGATGCT
GCAGGGTTTTGAGAGAAGAAGACTGATCTCACCTTCCAGGGAAGACCGAGCAGGACTCATGATA

The sequence of sample 47,as following(EK I -9/EK II -7):

ATCATGAGTCCTGCTCGGTCATGCCACAGAAGAATCTACTCAAATTCGCTCGCCGTGTGGAAC
GCAGCACAACAAGTGTAAATTGAACTCTCCAGATGTAAGTGTGATTGGATGAGCCATCTATGTAAATTGC
TTCGATGGCCATCAAGCAGTAGTTGATCATTGGCGCCATGATCGCCAGATCGCCCACTAATTAACGTTG
GCCTGCTTCCCTGAATTGGTACGCAGTCA

The sequence of sample 48,as following(EK I -9/EK II -9):

ATCATGAGTCCTGCTCGGTGGATGCTTGACGCCGATCTACCGTCTTCAAGGCACAGCTCTTTGGC
ACCATGAATGTGGACAATGCTACGTCCAGTGTGTCAAGATAGACGACATCAAAGCAAACGTATTCTT
GGACTTGCTTACTTTTCATCTACACCGATGGAATGCCTGAATTGGTACGCAGTCA

The sequence of sample 49,as following(EK I -9/EK II -10):

ATCATGAGTCCTGCTCGGTGTGGGACAAGATCTCCTACATGCCACGGCCGTTGCTGCCGATTCTT
CCATCCTCTTTGCTCCCTAAATAAAAATTCCAGCCTTTTCTGTTGCTGACCTCCTCCCCGCCTGAATTGG
TACGCAGTCA

The sequence of sample 50,as following(EK I -9/EK II -14):

TGACTGCGTACCAATTCAGGGGTTGGGGAGACACTGCGCATGGCGCAGGTTGGGCGGGCGCAAG
CACCTGTAGCGCTGTGGACACGAACAAAACCGAGCAGGACTCATGATA

The sequence of sample 51,as following(EK I -9/EK II -14):

GA CTGCGTACCAATTCAGGGGAATTACCAATGAGAGGAGTGGCAGCAGCCAGTGGAGGCGGGGT
TGCTCCTGGTTAGCTGGTTGCGCGGGCCCGTGGAGGAGAGGCCGTCAAACCGAGCAGGACTCATGAG
ACTGCGTACCAATTCAGGGTCTTCCGCTGCTCGGATTTCTGGGAAACAAAGTCATAGGCACGTAAGT
TCAGAGCCAAGCCAACTACGCCAATAA CACTCATCCATAAACCGAGCAGGACTCATGATA

The sequence of sample 52,as following(EK I -10/EK II -1):

GA CTGCGTACCAATTCAGTGCCTCCCCGGGATCAGGATGGCGTCATCCCAGGCTAGGAGGAAGA
AACCGGAGGGCAGGCATGGTGGCACTACCGAGCAGGGCTCATGATA

The sequence of sample 53,as following(EK I -10/EK II -8):

GA CTGCGTACCAATTCAGTGGCGGGGAGTGAAAACGTGCCCATCTTTTTCAACTTCTGCAGGAA
GCACCATCGTCTTCAGTGTT CAGATTTGGACCGAAGTAATTGGTTTGTGTCATACCGCTGCTGTTTAA
TTAGGAGAGGCACAGCTTTCTCCAGGGGGAGTGGCTTCAAAGGGAGATATAAAGAGGACCGAGCAGG
ACTCATGATA

The sequence of sample 54,as following(EK I -10/EK II -14):

TGACTGCGTACCAATTCAGTGAACAGTCGCAACAGAGCACCCAAAGTGGCCCCCTATCCCATCACT
CACTATTTTCATCACAAAGGATTTCTAACAAGGAATTACGGGGGTTACCTGAAAACGGCCCCCTGTATAA
CCCCCGGTACAACGGCACCAATGGTGCCTCTTGCAATCAAACCAAGCAGGACTCATGATA

The sequence of sample 55,as following(EK I -11/EK II -1):

TTTGGTCAGTCGAGTGCCTTCGACA ACTGGATCGACCACCAAAGCTTGCCTCCCAGGGGTGGCAA
TATGAGTCGGGTGATCAGATTGGT CGAATGTGATGGGTGTTTGGGACCATTT CAGATAATTTGCTTTTG
CTGGGGCAACCATGTT CACCTCTCGGTTAATGACTTTCAATCGACTCTTGCTTTCCACATCTGCAAAGA
TCATCAGAGTGGAGTTGATATGCGGATATCCTTCCTCACTGTCTCCTTGTCTTCGGCCTTGTCGGACTC
CTTCTCCTTGTCCTTAGACTGTTTTCTTGAAACTGCTGGATCAGGAGTCGACATTGGCGAGTGGTGTG
CTTCGGGTAAATGATATTCCCCTCTTCGCTTTCTTCGTGTGGATGTGACACGGCATA TCCATCACGTGCG
TTCCCTTCTTTATCCTTTACCTTCTTAGGGTTCCAGGATCCTTTTGGTTTCCCTTTAAACTTTCCCTGAGT
CACGGCCAGAGCCTCTCCAGGAGCTACCGAGAA

The sequence of sample 56,as following(EK I -11/EK II -7):

ATCATGAGTCCTGCTCGGTACCGTCCGGCTTCTACGCCTGCTTCTGCTTCACCAGCCTCATCTACTC
CTCCCCTCGAGATCGACTAGACA ACTTCTTAACTAGCTCTGCTTCTTCAGGCGTTATCTTAGGCGAATGG
GTGAACTTCTGATAAGTGTACGCGTGTATCCTTACAGTAAACTGCACACAGCTCTCTGAATTGGTACGC
AGTCA

The sequence of sample 57,as following(EK I -12/EK II -2):

AGTCCTGCTCGGTAGCTCCTGGAGAGGCTCTGGCCGTGACTCAGGGAAAGTTTAAAGGGAAACC
AAAAGGATCCTGGAACCCTAAGAAGGTAAAGGATAAAGAAGGGATGACGTGATGGATATGCCGTGTC
ACATCCACACGAAGAAAGACGAAGAGGGGAATATCATCTACCCGAAGCATACCACTCGCCAATGTGCG

ACTCCTGATCCAGCAGTTTCAGGGAAAACAGTCTAAGGACAAGGAGAAGGAGTCGGACAAGCCCCG
AGACAAGGAGGACAGTGAGGAAGGATATCCACAAATCAACTCCACTCTGATGATCTTTGCAGATGTGG
AAAGCAAGAGTCGATTGAAAATTATTAACCGTGAGGTGAACATGGTTGCCCCAGCAAAGGCAAATTAT
CTGAGATGGTCCCAAACACCCATCACATTGACCAATCTGATCACCCGACTCATATTGCCACCCCTGGG
AGGCAAGCTTTGGTGGTTCGATCCAGTTGTGCGAAGGCACTCGACTGACAAAAGTGCTGATGGACGGTG
GAAGCGGGCTGAATTGGTACGCAGTCA

The sequence of sample 58,as following(EK I -12/EK II -14):

GACTGCGTACCAATTCAGAAACAAATATGTACCACGTTACAAAAAAGAAACAATATGT
ACCACACACAGCATGAGTACCAGTAGGAGATTAGCCTGCGAGGTTTAATTACAAGCATAACGGCGCT
CAACAAAGGCGCGAGGAGTGAATCTGATGACTTGTGCGAGATTAGCCTGCCATCTTCTCCACCATTGT
TGTTGTCTTCTTCTTCTCGTCGTCTCCTCGCCATGATGTTGCTGCTTGGTGTGCGAGAAACGTTACCGA
GCAGGACTCATGATA

The sequence of sample 59,as following(EK I -12/EK II -9):

GACTGCGTACCAATTCAGAGTACTACTGATGCCTGTTGCATCTCATTACACAAGCAACCTCATGCCC
GTCTCCACTCAACTACGTACCCAACATCATGTCTCGATGCGAGATTCTTCAATTGCATCTTCTCTTTTT
CAGACCATTCGCCAATATCATGTCACGATTCACCTACAGACCACACCCTGAAATCGCATTGCAATCAGC
GAACAATAGAAATTTCTCAAGGAAAGAGGCTCATAACAAGAACAGCAAGAACACACTTTTGATTCCCT
AGTACCTGCGTCTCGATTGAGCAGCCTTCAAGAAATGCGTCGAGGCTGAAGCTCGTATTGCTTCTCA
CTGCGCATCCACACAGCCTCACTAGCTCGTACTGCAACGGACCCTCCTGATATGCCACCGAGCAGGAC
TCATGATA

The sequence of sample 60,as following(EK I -13/EK II -3):

ATCATGAGTCCTGCTCGGTATCTTCGGCGGATAGCGGTGATCGCCCAAGCCTGAGAGGGGATCATA
CGGTGGCGGGAAATCGTCGCGAAGCCGTGGGGACAGGAACGACTTCATGAATTGGTACGCAGTCA

The sequence of sample 61,as following(EK I -13/EK II -5):

TGACTGCGTACCAATTCATGGTCAGCGGCGGGGGAAGAACGTTGCAGCTCCTCCTCTATAAGC
ACCTTCATGATCCCGTAGGATCACTCAACCTCCCCTGTTGTCTTGCACCCTCGACACAGCACCATCTGT
ATTAACTTCAATACATCCTTGGTCAGGCTGTTCCCAACGCTCGACCGAGCAGGACTCATGATA

The sequence of sample 62,as following(EK I -13/EK II -6):

TGACTGCGTACCAATTCATGCACCAAAGACATATCTTCGAGGGAAGCAAGATACTCGAGATTAC
CATATTGCCCGTGCCTGGGCACAAAAGTGTGCCAACGCAAGGAGTGCCCAAGTCCTATTTATCATAAC
CACGTCTCCTCACTGCAACTAGTGAGCAACTTGACAACATGGGCGATTGGAGCCCTGTCCCTCCT
TGTAGATGCTGCGAAGATCATGTTTCATCACTCTTCTTTAGAAGCTTACGGGTCTATACCGGATGGCA
CGTTGAAAATCCCTTTCACCATAAGCTTGCTGAAGGTGATAGATTTGTTCTTGTGTTGAACTCAGAGA

GTACATGATTTCGTGTTTCATCGCAACAACTCAATGAGCTCATGGAGCACCTTGAAAGACCGAGCAGGA
CTCATGATA

The sequence of sample 63,as following(EK I -13/EK II -7):

TGACTGCGTACCAATTCATGAGGAAGTGGTATCTCTTTAGGATCCACCCCAGCGTCAAGAAATTG
GTTAATTGGTAAAGATACATGAATTTGGTGCCCCGCCCAAGAAAGAGACCCAAGTCCTAATAATCCCG
CTAAGTGGTGATTCAACATGGATTCTACACCTTGAACCAGGCCAATTTGGGAGCGGCTTTGTGATAAT
GGAACCAACCAGCAAAAAGCATTAAACGCTGCAAAAATCAATGCACCAATTGCAGTAAAATAGAGTTGT
AATTCACTAGTTATTCCAGATGCTCGCCAAAGCTGAAAAAAACCAGAGGTTATTTGGATTCTCGGAA
ACCCCCGCTACATCACCATTCGATATTTCTTGCCCTACTATAGGCCAAACTACCTGAGCACTGGGTCC
AATGTGAGTAGGATCACTTAGCCATGCTTCATAATTGGAAAAACGGGCGCCATGAAAGTACATGCCAC
TCAACCAAGAAAGATAATGGAAAGTTGCCGAAATGAGCACTAAAGACTTTTCGAGAAATCTCTCC
AAATCACAGTATGACTATCGAAATCGTGAGCATCAGCATGTAGGTTCCAGATCCAAGTGGTAGTATCA
GGGCCCTTAGCTAGTGTCTTGAGGAATGACCGAGCAGGACTCATGATA

The sequence of sample 64,as following(EK I -13/EK II -10):

ATCATGAGTCCTGCTCGGTGTAGGACCAGAAAGTTGTTGCATGCCACTGACACCGCAAGGGACT
GTAATGCTACTAGCTCTGAAGGTATTTGGCCTGCCAAGTTGTTGTGCGAGAGATCCAAGCTCTCCAGAT
CACTTAAATTAGATAAGGACTGTGGTATTGATCCATCAAACCTGTTTTCCGAGAAATTCAATGCCCTTAA
CCACTTCATGCCACCTATACTTTCATGAATGGATCCTTCAACTGGTTCGAAGAGAAATCAAGTCCAGT
CATGTAGTTGAGTATGTTTCCCCTGTATTTGCTCTGCCTGCCCTTGGTCATGAATTGGTACGCAGTCA

The sequence of sample 65,as following(EK I -13/EK II -10):

TATCATGAGTCCTGCTCGGTGTGAAACTGCGAATATTGCGTTACGGATCAAGGACCACTCTGTTGC
TTTTGGGCCTTTGAGTGGAAGCCGACGTGTGTATGGGTAAAAAATATAACAGTTAGGTGTGAGAGG
CCTACCTGGACCTCTTATTTGGCGCGTGGTGAGACGCCAGCCCAGCAAAAATGTCGTGAATTTAAAAC
AATGTCCAGTAATTTAGAAACTGTTCAAAAATCAAAAATGATCATGAATTGGTACGCAGTCA

The sequence of sample 66,as following(EK I -14/EK II -5):

ATCATGAGTCCTGCTCGGTGGAACGAGTCCTCCCAACGGGCGGTATCTATCTGTGCGGTGGCCC
GTGGGTGTTGCTGTCCAGTGTCCAATGAATTGGTACGCAGTCA

The sequence of sample 67,as following(EK I -14/EK II -6):

GACTGCGTACCAATTCATTGGTTACCTGCGGGAGGAATGGCCGCCCTCTTGCTCTCTTGCGGGC
ACAATGCGAGAGGGAGACGGCAAGACCGAGCAGGACTCATGATA

The sequence of sample 68,as following(EK I -14/EK II -8):

TATCATGAGTCCTGCTCGGTCCCTTCGTCCTCTTGCCGCTGCCGCTGCTGCGACCATCCTCCTC
CGCTGGGAATGAATTGGTACGCAGTCA

The sequence of sample 69,as following(EK I -14/EK II -10):

ATCATGAGTCCTGCTCGGTGTATAGAGAGGGCCTCACCGTTTAAAAGGGAACCATAGAAACGATG
GAACCCACTATTTTTTTTAGTATTATTAGAATGAATTGGTACGCAGTCA

The sequence of sample 70,as following(EK I -14/EK II -11)::

TGACTGCGTACCAATTCATTCTAATAATACTAAAAAAATAGTGGGTTCCATCGTTTCTATGGTTC
CTTTTAAACGGTGAGGCCCTCTCTATACACCGAGCAGGACTCATGATA

The sequence of sample 71,as following(EK I -14/EK II -12):

GACTGCGTACCAATTCATTGGTATAGGGGTTGAAGATGAAATTCATCATCCGAGAGAACACTGGA
GGAGCATTGACAAGGCCGGAAGACACGACAGTATATTCATAAGAACCAAAGCTCGTTCTGAATGCTGT
CTTGGGAATATCTTCTTCACGAATGCGAATCTGATAATAACCCATATGGAGGTCAAGCTTCGAGAATAC
TTTAGCACCTTTGAGTTGCTCAAATAGCTCATTGATGTTGGGAAGTGGATACTTGTCTTGATTGTCTTC
TTGTTCAATGGACGGTAGTCGACACAAAGTCGTTCCGTGCCATCCTTCTCTGGACAAAAGAACC
ACAACCCCATGGAGATGAACTCGGTCTGATCAAACCCATACGCTCTTGTTTCATCGAGCTGTTTCTCAA
TTCCTTCAGCTCCTTGGGTCCAAGCTTGTATGGATGCTTGCAAACGGGTTGAGTGCCGGGCTCAAGAT
CGATAACGAACTCAACTCACCGAGCAGGACTCATGATA

The sequence of sample 72,as following(EK I -14/EK II -13):

TGACTGCGTACCAATTCATTGCCAGTAACACCGTCACAGATGTTTCGTCAGAGCGCAGCATCACC
CACACGACACCACCCCGTCCAAGATTTGTCAGCCGAGCTGAAAGCTATCTGCTGTATCCAAATGCTT
CAACCGAGCAGGACTCATGATA

The sequence of sample 73,as following(EK I -14/EK II -16):

TGACTGCGTACCAATTCATTACAGTACCTTGAATCTGGGTCCAACCTCTGTCTCCAGTAAAGATGT
GCTGTAACCCAAGCGATTCAATCCCATCTCGCTCACAGACAACATGTAGCATTGCGCCACTCGATCG
CTGGAGCCCAAACCTCTGAACACATACAGTATATAGTGGAGTAGTATTAACCGAGCAGGACTCATGATA

The sequence of sample 74,as following(EK I -16/EK II -3):

ATCATGAGTCCTGCTCGGTATTGATCGGATATGAAGGAGGTCAGCTCCGTACTIONGCGTTTTCTTTCT
AACTCAGTCGGTGGACCCAGACTTTTTCCACATGCCAGCATCACCAGGGCCGTCATGCATGCAAGTC
TTTATAATTTCCGACACCGTATGAATTGGTACGCAGTCA

The sequence of sample 75,as following(EK I -16/EK II -11):

TGACTGCGTACCAATTCATAGCCGAATGGACCCCAACGCCAGATGAAGAGGTCTAGAGACAAG
CATCCCCGTGCAAGAGGCAAACAGTGAATGGGTAATGTACTTCGATGGTGCTTTCTCGCTGCAAGGCA
CCGAGCAGGACTCATGATA

The sequence of sample 76,as following(EK I -16/EK II -12):

GACTGCGTACCAATTCATAACATCCAGACCACAGCACCAAACCATTAATCAGTACAGGCAATGCTT
GCATGATAACTGTGTCTTACACACTCCCTGATCCAGAGCATTCCGCATACAAACTAACAGCAGCATAGC

GAAAAGAGACTCTTCTGGTTCACGCCGAGTCGTCAAACTCATTTGGGGTTCCTGAGGACGATGATGAC
CGAATCCCCGCGGAGGAACATCTTGCTTATGAACCTGTCCTTGTTACCGAGCAGGACTCATGAT

The sequence of sample 77, as following (EK I -16/EK II -15):

GACTGCGTACCAATTCATACGGTCTCGAAAAATTATGAAAACTTACACGCATGATGGCCCTGGTGA
TGCGTGCGTGTGGAAAAAGTTTGGGGTCCACCGGCTGAGTCAGAAATTAAGCGCAGTACGGAGCTG
ACCTCCTTCATATCCAATCAGAACCGAGCAGGACTCATGATA