

**Supplementary information for:**

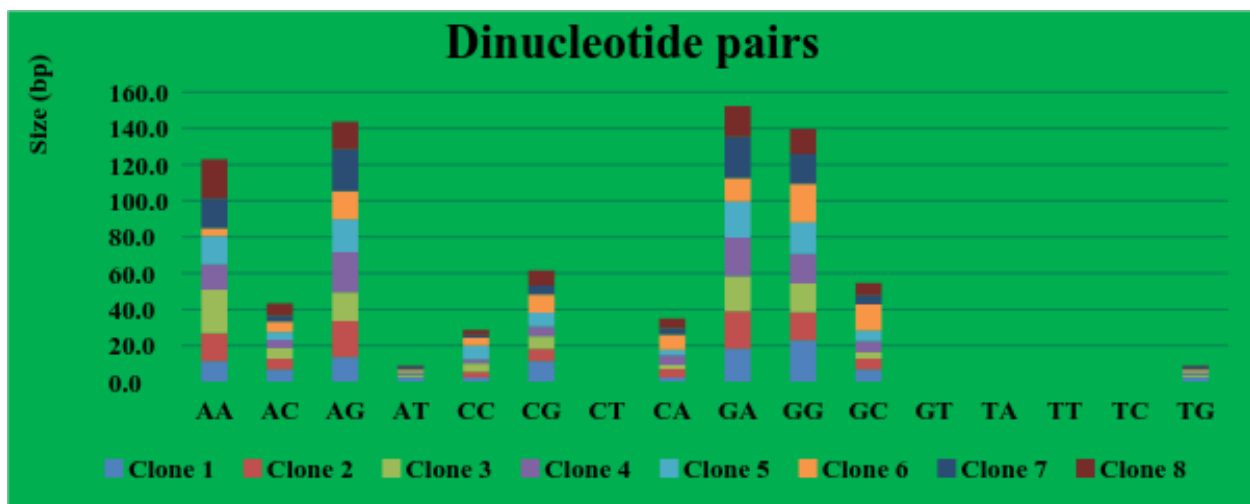
**Template independent synthesis of nucleic acid libraries**

<b>Clone Name</b>	<b>Length (bp)</b>	<b>Tm (°C)</b>	<b>GC (%)</b>
Clone 1	74	71.2	43.2
Clone 2	216	69.8	51.4
Clone 3	118	72.3	43.2
Clone 4	157	72.1	49
Clone 5	216	69.4	54.2
Clone 6	102	74	52.9
Clone 7	92	71	40.2
Clone 8	173	72.3	47.4

**Supplementary Table 1:** Percentage GC content analysis of the ORFs of cloned members

(Including polyA tail)

Excluding polyAAA tail								
Dinucleotide pair frequency (%)								
Sequence	Clone 1	Clone 2	Clone 3	Clone 4	Clone 5	Clone 6	Clone 7	Clone 8
AA	11.4	15.6	23.9	14.2	15.6	4.3	16.4	21.7
AC	6.8	5.9	5.7	4.7	4.3	5.7	3.3	7.0
AG	13.6	19.9	15.9	22.0	18.3	15.7	23.0	15.4
AT	2.3	0.5	1.1	0.8	0.5	1.4	1.6	0.7
CC	2.3	3.2	4.5	2.4	7.5	4.3	1.6	2.8
CG	11.4	7.0	6.8	5.5	7.5	10.0	4.9	8.4
CT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CA	2.3	4.8	2.3	5.5	2.7	8.6	3.3	5.6
GA	18.2	21.0	19.3	21.3	19.9	12.9	23.0	16.8
GG	22.7	15.6	15.9	16.5	17.2	21.4	16.4	14.0
GC	6.8	5.9	3.4	6.3	5.9	14.3	4.9	7.0
GT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TG	2.3	0.5	1.1	0.8	0.5	1.4	1.6	0.7



Excluding polyAAA tail								
Single nucleotide frequency (%)								
Content	Clone 1	Clone 2	Clone 3	Clone 4	Clone 5	Clone 6	Clone 7	Clone 8
<b>A</b>	15	78	41	53	72	19	27	64
<b>T</b>	1	1	1	1	1	1	1	1
<b>G</b>	22	80	35	57	81	34	28	55
<b>C</b>	7	28	12	17	33	17	6	24
<b>Sum</b>	45	187	89	128	187	71	62	144
<b>GC content</b>	29	108	47	74	114	51	34	79
<b>%GC content</b>	64.4	57.8	52.8	57.8	61.0	71.8	54.8	54.9
<b>%A content</b>	33.3	41.7	46.1	41.4	38.5	26.8	43.5	44.4
<b>%G content</b>	3.4	0.9	2.1	1.4	0.9	2.0	2.9	1.3
<b>%C content</b>	34.1	138.5	66.3	98.6	132.9	47.3	51.1	100.3
<b>%T content</b>	21.0	67.1	26.0	41.1	85.7	63.5	13.8	54.0

