J Genet Resour 2025; 11(2): 191-202 *Homepage: http://sc.journals.umz.ac.ir/*

RESEARCH ARTICLE *DOI: 10.22080/jgr.2025.28696.1424*

Supplement 1. The motif with the highest frequency in the camel ecotype's genome, by type of motif

Motif Order	10-mer	9-mer	8-mer	7-mer	6-mer	5-mer	4-mer	3-mer	2-mer	1-mer
A) *Camelus dromedarius* (Turkmen camel)										
1	TGTGTGTGTC	TTTCTTTCT	AAAAAAAC	AAAAAAC	AAAAAC	AAAAC	AAAC	AAC	AC	T
2	ACACACACAG	AAAGAAAGA	ACACACAG	GTTTTTT	TTTTTG	TTTTG	TTTG	TTG	TG	A
3	TCTCTCTCTG	CTTTCTTTC	AAGAAAGG	TTTTTTG	GTTTTT	GTTTT	TTTA	TTA	GT	C
4	GTGTGTGTGC	AAAAAAAAC	GTTTTTTT	AAAAAAG	AAAACA	TGTTT	AAAT	TAA	CA	G
5	ACACACAGAC	TGGTGATGG	CTTTCTTC	AAAAACA	TTTTGT	AAAAG	AAAG	AAT	TA	-
6	ACACACACAT	TTTTTTTTG	TGTGTGTC	TGTTTTT	TGTTTT	AAAAT	GTTT	TAT	AT	-
7	AGAGAGAGAC	TGATGGTGA	AGAAAGAG	TTTGTTT	TTTGTT	CAAAA	TAAA	ATT	TC	-
8	TGTGTGTGCG	CATCATCAC	TCTTTCTC	AAAACAA	TTGTTT	AAACA	TTTC	ATA	AG	-
9	TGTGTGTGTA	GAAAGAAAG	TTTTTTTG	TTTTGTT	AAAAAG	TTTTC	TATC	ATC	GA	-
10	CACACACACG	CACCATCAC	CCTTCCTC	TTGTTTT	CAAAAA	TTTGT	TGAA	ATG	CT	-
MaSit	8	13	39	323	345	1986	2385	752	15901	11059
MiSit	1	1	1	1	1	1	1	2	19	1093
AvSit	1.1	1.3	1.6	2.5	4.7	24.7	147.2	140.2	4900.6	6137.5
SDSit	0.605	1.206	2.322	10.171	17.965	117.090	272.0	173.5	5398.4	5648.5
B) *Camelus dromedarius* (Arabian camel)										
1	TGTGTGTGTC	AAAGAAAGA	AAGAAAGG	AAAAAAC	AAAAAC	AAAAC	AAAC	TTG	AC	T
2	ACACACACAG	TTTCTTTCT	AAAAAAAC	GTTTTTT	TTTTTG	TTTTG	TTTG	AAC	TG	A
3	TCTCTCTCTG	CACACACAC	CTTTCTTC	TTTTTTG	AAAACA	GTTTT	TTTA	TTA	GT	C
4	GTGTGTGTGC	GAAAGAAAG	AGAAAGAG	AAAAAAG	GTTTTT	TGTTT	AAAT	AAT	CA	G
5	AAAAAAAAAC	CACCACCAT	CTTCCTTT	AAAAACA	TGTTTT	AAAAG	AAAG	TAA	TA	-
6	AGACACACAC	CTTTCTTTC	TCTTTCTC	TGTTTTT	TTTTGT	AAAAT	TTTC	TAT	AT	-
7	AAGAAGAAGA	AAAAAAAAC	ACACACAG	TTTGTTT	TTTGTT	AAACA	GTTT	ATT	TC	-
8	CACACACGCA	TGGTGATGA	GTTTTTTT	CAAAAAA	CAAAAA	CAAAA	TAAA	ATA	AG	-
9	TCTCTCTCTT	ATATATATA	TTTTTTTG	AAAACAA	AAAAAG	TTTTC	CTTT	ATC	GA	-
10	TAATAATAAT	TGGTGATGG	AGAGAGAA	TTTTGTT	TTGTTT	TTTGT	AAGG	ATG	CT	-
MaSit	10	22	55	334	402	2083	2413	787	17226	13624
MiSit	1	1	1	1	1	1	1	1	13	731
AvSit	1.2	1.4	1.8	2.4	4.9	24.7	168.3	135.5	5184.0	7342.2
SDSit	0.774	1.627	3.480	10.714	20.182	123.141	303.91	183.9	5809.8	7228.26
C) *Camelus bacterianus* (Bactrian camel)										
1	ACACACACAG	TTTCTTTCT	AAGAAAGG	AAAAAAC	AAAAAC	AAAAC	AAAC	AAC	AC	T
2	TGTGTGTGTC	AAAGAAAGA	AAAAAAAC	GTTTTTT	TTTTTG	TTTTG	TTTG	TTG	TG	A
3	GAGAGAGAGG	CATCACCAC	AGAAAGAG	AAAAAAG	AAAACA	GTTTT	TTTA	TTA	GT	G
4	TCTTTCTTTC	TTCCTTTCT	CTTTCTTC	TTTTTTG	GTTTTT	TGTTT	AAAG	TAA	CA	C
5	AGAAAGAAAG	CACCACCAT	CTTCCTTT	AAAAACA	TTTTGT	AAAAG	TTTC	AAT	TA	-
6	GTGTGTGTGC	CTTTCTTTC	TCTTTCTC	TTTGTTT	TTTGTT	AAAAT	AAAT	TAT	AT	-
7	AAGAAGAAGA	CATCATCAC	AAGGAAGA	TGTTTTT	TGTTTT	CAAAA	AAGG	ATT	TC	-

Continuous **Supplement 1.** The motif with the highest frequency in the camel ecotype's genome, by type of motif

Motif Order	10-mer	9-mer	8-mer	7-mer	6-mer	5-mer	4-mer	3-mer	2-mer	1-mer
8	TGTGTCTGTG	GAAAGAAAG	GTTTTTTT	CAAAAAA	AAAAAG	AAACA	GTTT	ATA	AG	-
9	AGAGAGAGAC	CACCATCAC	TTTTTTTG	TTTTGTT	CAAAAA	TTTGT	TAAA	ATC	GA	-
10	GACAGAGAGA	TGATGATGG	TGTGTGTC	AAAACAA	TATATC	TTTTC	CTTC	ATG	CT	-
MaSit	11	31	67	332	444	2100	2581	776	17414	14366
MiSit	1	1	1	1	1	1	1	1	27	276
AvSit	1.2	1.4	1.9	2.4	5.0	25.1	169.6	137.0	4992.7	7232.2
SDSit	0.772	1.892	3.871	10.498	21.313	123.684	318.1	177.0	5892.4	7948.7
D) *Camelus ferus* (Wild Bactrian camel)										
1	TGTGTGTGTC	TTTCTTTCT	AAAAAAAC	AAAAAAC	AAAAAC	AAAAC	AAAC	TTG	AC	T
2	ACACACACAG	AAAGAAAGA	AAGAAAGG	GTTTTTT	TTTTTG	TTTTG	TTTG	AAC	TG	A
3	TCTCTCTCTT	GAAAGAAAG	AGAAAGAG	TTTTTTG	AAAACA	GTTTT	TTTA	TAA	GT	C
4	AGAAGAAGAA	TGATGGTGA	CTTTCTTC	AAAAAAG	GTTTTT	TGTTT	AAAG	TTA	CA	G
5	ACACACATAC	CACCACCAT	TGTGTGTC	AAAAACA	TTTTGT	AAAAG	TTTC	AAT	TA	-
6	TCTCTCTCTG	CTTTCTTTC	TCTTTCTC	TGTTTTT	TGTTTT	AAAAT	AAAT	TAT	AT	-
7	CACACACACG	TTCCTTTCT	GTTTTTTT	TTTTGTT	TTTGTT	AAACA	TAAA	ATT	TC	-
8	GTGTGTGTGG	CATCACCAT	AAGGAAGA	TTTGTTT	AAAAAG	CAAAA	GTTT	ATA	AG	-
9	GAGAGAGAGG	AAAAAAAAC	TTTTTTTG	AAAACAA	CAAAAA	TTTTC	CTTC	ATC	GA	-
10	CACCCTCACA	CTTCTTCTC	ACACACAG	CAAAAAA	AGAGAC	TTTGT	AAGG	CAA	CT	-
MaSit	9	32	64	364	478	2073	2545	800	17289	14786
MiSit	1	1	1	1	1	1	1	1	15	316
AvSit	1.1	1.4	1.9	2.4	5.1	26.1	169.0	135.7	5033.2	7545.5
SDSit	0.664	1.874	3.532	11.284	22.097	126.771	310.8	180.1	5919.4	8325.4

MaSit: maximum number of motives site; MiSit: minimum number of motives site; AvSit: Average number of motives sites; SDSit: Standard Deviation of motives Sites.