Supporting Online Material

Supplementary table 1. Sequences and haplogroup nomenclature included in the evolutionary compendium. The details of the sequences included in the evolutionary compendium are provided, including a short name (Short Name), comprising an ID number, the haplogroup assignment of the sequence, and the original sequence name as provided in the appropriate databases (Original Name). Note that because running ID numbers were provided prior to the elimination of redundant sequences, the numbers are not consecutive.

SUPPLEMENTARY TABLE 1 IS TOO LARGE TO BE INCLUDED IN THE SUBMISSION BODY (2400 ROWS). THE TABLE IS AVAILABLE IN
http://bioinfo.bgu.ac.il/rubin/7391856/Zhidkov2008/SuppTable1.txt

Supplementary table 2. Mutations included in the cancer compendium. The *de novo* mutations reported in [6] and [7] were assembled into a single compendium. Each *de novo* mutational event is reported in a row; mutations that occurred in the same position in different samples are reported in consecutive rows. The following details are provided for each mutations: **Position** - the mtDNA nucleotide position in the revised Cambridge Reference Sequence (rCRS **:** GenBank AC_000021.2) corresponding to the mutated base; **sample ID** - the sample ID as provided in the source papers; **Cancer type** - the type of tumor from which the sample was obtained (HNSCC = Head and Neck Squamous Carcinoma; PANC = Pancreatic Cancer); **mtDNA locus** – the mtDNA locus in which the mutation is located; **From –** the nucleotide observed in the non-cancerous sample; **To –** the nucleotide observed in the matching tumor sample.

Position	Sample ID	Cancer type	mtDNA locus	From	To	Position	Sample ID	Cancer type	mtDNA locus	From	To
20	1164	HNSCC	D-loop	A	C	1495	2444	HNSCC	12SrRNA	C	T
25	1356	HNSCC	D-loop	T	A	1593	2714	HNSCC	12SrRNA	T	C
25	1736	HNSCC	D-loop	T	C	1811	Case14	PANC	16SRNA	A	G
25	2702	HNSCC	D-loop	T	A	1811	Case11	PANC	16SRNA	A	G
30	2043	HNSCC	D-loop	T	C	1811	1836	HNSCC	16SrRNA	A	G
39	2828	HNSCC	D-loop	C	T	1990	3538	HNSCC	16SrRNA	G	A
64	1356	HNSCC	D-loop	C	T	2004	2818	HNSCC	16SrRNA	G	A
70	2126	HNSCC	D-loop	A	G	2069	1680	HNSCC	16SrRNA	T	G
72	2455	HNSCC	D-loop	T	C	2083	1680	HNSCC	16SrRNA	T	G
94	Case9	PANC	D-loop	G	A	2234	Case6	PANC	16S	C	T
94	Case12	PANC	D-loop	G	A	2352	1680	HNSCC	16SrRNA	T	C
131	2555	HNSCC	D-loop	T	C	2352	1736	HNSCC	16SrRNA	T	C
150	1736	HNSCC	D-loop	C	T	2483	1736	HNSCC	16SrRNA	T	C
185	1691	HNSCC	D-loop	G	A	2581	2555	HNSCC	rRNA	A	G
189	2075	HNSCC	D-loop	A	G	2618	2704	HNSCC	16SrRNA	T	C
195	Case15	PANC	D-loop	T	C	2698	Case10	PANC	16SRNA	G	A
195	Case14	PANC	D-loop	T	C	2706	1680	HNSCC	16SrRNA	A	G
195	1680	HNSCC	D-loop	T	C	2706	1691	HNSCC	16SrRNA	A	G
215	1691	HNSCC	D-loop	A	G	2706	2455	HNSCC	16SrRNA	A	G
215	2553	HNSCC	D-loop	A	G	2706	2828	HNSCC	16SrRNA	A	G
228	Case15	PANC	D-loop	A	G	3010	2778	HNSCC	16SrRNA	G	A
228	1691	HNSCC	D-loop	G	A	3032	Case10	PANC	16SRNA	G	A
251	1691	HNSCC	D-loop	G	A	3079	2232	HNSCC	16SrRNA	G	A
295	1691	HNSCC	D-loop	C	T	3197	2043	HNSCC	16SrRNA	T	C
462	1691	HNSCC	D-loop	C	T	3277	1736	HNSCC	tRNALeu	G	A
477	Case15	PANC	D-loop	T	C	3326	Case11	PANC	ND1	T	G
482	Case15	PANC	D-loop	C	T	3360	1680	HNSCC	ND1	A	G
489	1691	HNSCC	D-loop	T	C	3570	1017	HNSCC	ND1	C	A
489	2195	HNSCC	D-loop	T	C	3664	2717	HNSCC	ND1	G	A
490	1017	HNSCC	D-loop	T	C	3700	2008	HNSCC	ND1	G	A
499	1836	HNSCC	D-loop	G	A	4024	1493	HNSCC	ND1	A	G
558	2550	HNSCC	D-loop	C	T	4037	2382	HNSCC	ND1	G	A
630	Case9	PANC	TRNA	C	T	4216	1691	HNSCC	ND1	T	C
630	Case12	PANC	TRNA	C	T	4580	1691	HNSCC	ND2	G	A
678	Case7	PANC	12SRNA	T	C	4580	2455	HNSCC	ND2	G	A
841	Case8	PANC	12SRNA	A	G	4605	1017	HNSCC	ND2	A	G
841	Case4	PANC	12SRNA	A	G	4639	2455	HNSCC	ND2	T	C
841	Case2	PANC	12SRNA	A	G	4639	2555	HNSCC	ND2	C	T
912	1680	HNSCC	12SrRNA	T	A	4646	Case14	PANC	ND2	T	C
924	1017	HNSCC	12SrRNA	A	T	4646	1836	HNSCC	ND2	T	C
1323	Case3	PANC	12SRNA	G	A	4689	1691	HNSCC	ND2	A	G
1323	1680	HNSCC	12SrRNA	G	A	4715	2714	HNSCC	ND2	A	G

Position	Sample ID	Cancer type	mtDNA locus	From	To
4752	1736	HNSCC	ND2	T	C
4776	2018	HNSCC	ND2	G	A
4776	3538	HNSCC	ND2	G	A
4793	2555	HNSCC	ND2	A	G
4831	2553	HNSCC	ND2	G	A
5002	1356	HNSCC	ND2	T	C
5004	1493	HNSCC	ND2	T	C
5021	1836	HNSCC	ND2	T	C
5147	2828	HNSCC	ND2	G	A
5198	1691	HNSCC	ND2	A	G
5252	1817	HNSCC	ND2	G	A
5263	2455	HNSCC	ND2	C	T
5276	1493	HNSCC	ND2	A	G
5305	1017	HNSCC	ND2	C	G
5368	Case4	PANC	ND2	C	G
5390	2075	HNSCC	ND2	A	G
5570	1680	HNSCC	tRNATrp	T	T
5580	2828	HNSCC	D-loop	T	C
5615	1017	HNSCC	tRNAAla	A	G
5799	1680	HNSCC	tRNACys	A	G
5848	1680	HNSCC	tRNATyr	T	G
5940	Case12	PANC	COI	A	G
5999	Case10	PANC	COI	T	C
5999	1836	HNSCC	COI	T	C
6047	1836	HNSCC	COI	A	G
6128	2550	HNSCC	COI	C	T
6680	2828	HNSCC	COI	T	C
7002	2455	HNSCC	COI	C	T
7028	1680	HNSCC	COI	C	T
7028	1691	HNSCC	COI	C	T
7028	2455	HNSCC	COI	C	T
7028	2555	HNSCC	CO1	T	C
7028	2828	HNSCC	COI	C	T
7075	Case10	PANC	COI	G	C
7175	Case15	PANC	COI	T	C
7256	Case15	PANC	COI	C	T
7274	Case15	PANC	COI	C	T
7424	2051	HNSCC	COI	A	G
7424	2828	HNSCC	COI	A	G
7468	1017	HNSCC	tRNASer	C	T
7521	Case15	PANC	TRNA	G	A
7702	1691	HNSCC	COII	G	A
7705	1836	HNSCC	COII	T	C
7771	Case15	PANC	COII	A	G
7791	1017	HNSCC	COII	C	T
7956	2043	HNSCC	COII	C	A
8163	Case11	PANC	COII	A	C
8206	Case15	PANC	COII	G	A
8251	2555	HNSCC	CO2	G	A
8269	1493	HNSCC	COII	G	A
8419	1017	HNSCC	ATP8	T	C
8584	2714	HNSCC	ATP6	G	A
8618	2828	HNSCC	ATP6	T	C
8701	1680	HNSCC	ATP6	A	G
8701	1736	HNSCC	ATP6	A	G
8701	2714	HNSCC	ATP6	A	G
8701	2828	HNSCC	ATP6	A	G
8869	2455	HNSCC	ATP6	A	G
9003	1809	HNSCC	ATP6	C	T
9050	1017	HNSCC	ATP6	G	A
9100	1691	HNSCC	ATP6	A	G
9123	1493	HNSCC	ATP6	G	A
9210	2818	HNSCC	COIII	A	G
9221	Case15	PANC	COIII	A	G
9247	2907	HNSCC	COIII	G	A
9377	1736	HNSCC	CO3	A	G
9378	2455	HNSCC	COIII	T	C
9477	2043	HNSCC	COIII	G	A
9540	Case15	PANC	COIII	T	C
9540	1736	HNSCC	CO3	T	C
9540	2714	HNSCC	COIII	T	C
9540	2828	HNSCC	COIII	T	C
9591	2043	HNSCC	COIII	G	A
9629	2455	HNSCC	COIII	C	T
9668	2043	HNSCC	COIII	C	G
9910	2075	HNSCC	CO3	T	A
9972	Case6	PANC	COIII	A	G
10044	1493	HNSCC	tRNAGly	A	G
10115	Case15	PANC	ND3	T	C
10301	Case13	PANC	ND3	A	C
10361	2760	HNSCC	ND3	T	C
10398	1680	HNSCC	ND3	A	G
10398	1691	HNSCC	ND3	A	G
10398	1736	HNSCC	ND3	A	G
10398	2714	HNSCC	ND3	A	G
10398	2828	HNSCC	ND3	A	G
10410	1063	HNSCC	tRNAArg	T	C
10417	Case13	PANC	TRNA	T	C
10450	Case13	PANC	TRNA	A	G
10572	Case14	PANC	ND4L	G	A
10695	2232	HNSCC	ND4L	G	A
10819	1736	HNSCC	ND4	A	G
10873	1736	HNSCC	ND4	T	C
10873	2828	HNSCC	ND4	T	C
10885	Case13	PANC	ND4	T	C
10895	Case5	PANC	ND4	A	G
10901	Case13	PANC	ND4	A	G
11083	Case13	PANC	ND4	A	G
11251	1691	HNSCC	ND4	A	G
11299	2105	HNSCC	ND4	G	T
11324	1280	HNSCC	ND4	T	G
11324	2553	HNSCC	ND4	T	G
11332	1836	HNSCC	ND4	C	T
11377	Case13	PANC	ND4	G	A
11466	2043	HNSCC	ND4	T	G
11467	1836	HNSCC	ND4	A	G
11471	Case13	PANC	ND4	C	T
11827	Case13	PANC	ND4	T	C
11889	1493	HNSCC	ND4	G	A
11947	Case12	PANC	ND4	A	G

Position	Sample ID	Cancer type	mtDNA locus	From	To
12308	Case14	PANC	TRNA	A	G
12308	1836	HNSCC	tRNALeu	A	G
12308	2043	HNSCC	tRNALeu	A	G
12361	1836	HNSCC	ND5	A	G
12372	Case14	PANC	ND5	G	A
12372	1836	HNSCC	ND5	G	A
12372	2043	HNSCC	ND5	G	A
12406	1493	HNSCC	ND5	G	A
12406	1736	HNSCC	ND5	G	A
12414	Case12	PANC	ND5	T	C
12603	2555	HNSCC	ND5	C	T
12612	Case9	PANC	ND5	A	G
12612	1691	HNSCC	ND5	A	G
12633	1493	HNSCC	ND5	C	A
12705	1736	HNSCC	ND5	C	T
12705	2051	HNSCC	ND5	T	C
12705	2714	HNSCC	ND5	C	T
12705	2828	HNSCC	ND5	C	T
12937	Case14	PANC	ND5	A	G
13105	2828	HNSCC	ND5	A	G
13241	Case10	PANC	ND5	T	C
13263	2714	HNSCC	ND5	A	G
13368	1493	HNSCC	ND5	G	A
13414	2043	HNSCC	ND5	G	A
13563	1836	HNSCC	ND5	A	G
13617	2043	HNSCC	ND5	T	C
13708	1691	HNSCC	ND5	G	A
13789	1809	HNSCC	ND5	T	G
13886	2828	HNSCC	ND5	T	C
13970	1356	HNSCC	ND5	G	A
14284	2828	HNSCC	ND6	C	T
14318	2714	HNSCC	ND6	T	C
14353	1836	HNSCC	ND6	T	C
14524	2714	HNSCC	ND6	A	G
14543	Case8	PANC	ND6	A	G
14543	Case5	PANC	ND6	A	G
14620	Case14	PANC	ND6	C	T
14620	1836	HNSCC	ND6	C	T
14766	Case15	PANC	CYTB	T	C
14793	2043	HNSCC	CytB	A	G
14798	1691	HNSCC	CytB	T	C
14815	1809	HNSCC	CytB	C	A
14884	Case11	PANC	CYTB	C	T
14905	1736	HNSCC	CytB	G	A
14969	1493	HNSCC	CytB	T	C
15017	Case10	PANC	CYTB	T	C
15043	2714	HNSCC	CytB	G	A
15058	2828	HNSCC	CytB	C	T
15218	2043	HNSCC	CytB	A	G
15257	1565	HNSCC	CytB	G	A
15301	1736	HNSCC	CytB	G	A
15301	2714	HNSCC	CytB	G	A
15301	2828	HNSCC	CytB	G	A
15307	2760	HNSCC	CytB	C	T
15369	1809	HNSCC	CytB	C	A
15409	Case8	PANC	CYTB	C	G
15433	1017	HNSCC	CytB	C	T
15452	1493	HNSCC	CytB	C	A
15487	2714	HNSCC	CytB	A	T
15607	1493	HNSCC	CytB	A	G
15693	Case14	PANC	CYTB	T	C
15693	Case11	PANC	CYTB	T	C
15693	1836	HNSCC	CytB	T	C
15766	2828	HNSCC	CytB	A	G
15884	Case12	PANC	D-loop	G	C
15904	1691	HNSCC	tRNAThr	C	T
15904	2455	HNSCC	tRNAThr	C	T
15928	1493	HNSCC	tRNAThr	G	A
15937	1817	HNSCC	D-loop	A	G
16069	1691	HNSCC	D-loop	C	T
16086	2714	HNSCC	D-loop	T	C
16093	2039	HNSCC	D-loop	T	C
16124	2828	HNSCC	D-loop	T	C
16126	1493	HNSCC	D-loop	T	C
16126	1691	HNSCC	D-loop	T	C
16129	Case1	PANC	D-loop	G	A
16134	Case14	PANC	D-loop	C	T
16134	Case11	PANC	D-loop	C	T
16147	1858	HNSCC	D-loop	C	T
16153	Case7	PANC	D-loop	G	A
16153	2828	HNSCC	D-loop	G	A
16172	1736	HNSCC	D-loop	T	C
16223	1736	HNSCC	D-loop	C	T
16223	2714	HNSCC	D-loop	C	T
16223	2828	HNSCC	D-loop	C	T
16261	1535	HNSCC	D-loop	C	T
16270	2043	HNSCC	D-loop	C	T
16278	1836	HNSCC	D-loop	C	T
16278	2714	HNSCC	D-loop	C	T
16298	2455	HNSCC	D-loop	T	C
16298	2714	HNSCC	D-loop	T	C
16311	Case12	PANC	D-loop	T	C
16311	1736	HNSCC	D-loop	T	C
16311	2051	HNSCC	D-loop	C	T
16319	1565	HNSCC	D-loop	G	A
16320	1565	HNSCC	D-loop	C	T
16320	1736	HNSCC	D-loop	C	T
16325	2714	HNSCC	D-loop	T	C
16356	Case14	PANC	D-loop	T	C
16356	1836	HNSCC	D-loop	T	C
16428	2043	HNSCC	D-loop	G	A
16488	3538	HNSCC	D-loop	C	T
16519	Case12	PANC	D-loop	T	C
16519	1493	HNSCC	D-loop	T	C
16519	2555	HNSCC	D-loop	T	C

Supplementary table 3. List of *de novo* cancer mutations involved in COMs. The mutations involved in COMs (see text for definition) are listed: **Mutation** – the wild-type nucleotide, the position (in the equivalent revised Cambridge Reference Sequence (GenBank AC_000021.2) position) and the mutated base; **Region** - the region in which each mutation is located in; **Wild-type Amino Acid** - the amino encoded by the wild type variants; **Mutated Amino Acid** - the corresponding mutated variants, **Occurrence In Control Population** - the number of occurrences of the mutated variant in the evolutionary compendium. *For non coding positions, the minus sign (-) is used instead of an amino acid; non-synonymous amino acids substitutions are indicated in bold.

Mutation	Region	Wild-type Amino Acid*	Mutated Amino Acid*	Occurrence In Control Population
T94A	D-loop	-	-	14
A630T	tRNA-Phe	-	-	0
C1811G	16S RNA	-	-	172
G2352C	16S RNA	-	-	38
C2706G	16S RNA	-	-	1914
T4580A	ND2	M	M	57
G4639C	ND2	I	**T**	16
A4639T	ND2	T	**I**	2384
G4646C	ND2	Y	Y	15
C7028T	COI	A	A	1930
G7028C	COI	A	A	469
C7424G	COI	E	**D**	12
C8701G	ATP6	A	**T**	784
G9540C	COIII	L	L	791
C10398G	ND3	T	**A**	1093
G10873C	ND4	P	P	788
C12308G	tRNA-Leu(CUN)	-	-	287
T12372A	ND5	L	L	329
G12705C	ND5	I	I	1353
A12705T	ND5	I	I	1046
A14620T	ND6	G	G	13
T15301A	Cytb	L	L	740
G15693C	Cytb	M	**T**	13
A15904T	tRNA-Thr	-	-	58
A16134T	D-loop	-	-	2
A16223T	D-loop	-	-	939
G16311C	D-loop	-	-	377
A16311T	D-loop	-	-	1539
G16356C	D-loop	-	-	26

Supplementary table 4. Sequence variants found in the evolutionary compendium at positions involved in COMs. The different sequence variants found in the evolutionary compendium at the same positions involved in each of the COMs (A-O) are reported. For each variant, the first 2-5 columns describe the nucleotides bases found at each COM position, with bold base names indicating variants observed in the cancer compendium. The total number of sequences that contain each variant is reported (Occ), as well as the haplogroup assignments of all the sequences carrying this variant. For each haplogroup, the number of sequences found to carry the particular variant and the total number of sequences in the compendium that were assigned to this haplogroup are provided (in parenthesis). COMs naming is as in Figure 2B. *For COMs involving D-loop nucleotide positions, only 1917 sequences for which the D-loop sequence was determined were included in the analysis.

A. $\alpha 1^*$

8701	9540	10398	10873	12705	15301	16223	Occ	Occurs in haplogroups (# with variant/total)
A	T	A	T	C	G	C	727	B4a(35/37), B4b(28/29), Bs1(19/24), Bs3(1/1), F(56/56), H1(75/76), H10(6/6), H13(12/12), H2(11/11), H4(12/12), H5(14/15), H6(7/7), H7(12/12), HV1(2/2), HVs1(1/1), HVs2(13/13), HVs3(2/2), Hs1(20/20), Hs10(2/2), Hs11(7/7), Hs12(7/7), Hs13(2/2), Hs14(1/1), Hs16(2/2), Hs17(32/32), Hs18(1/1), Hs20(7/7), Hs21(2/2), Hs22(1/1), Hs23(1/1), Hs24(1/1), Hs25(3/3), Hs26(6/6), Hs28(2/2), Hs29(1/1), Hs3(1/1), Hs6(1/1), Hs7(2/2), Hs8(2/2), Hs9(1/1), J(3/98), K(14/70), P(14/18), R31(3/3), R5(10/10), Rs1(5/5), Rs2(2/2), Rs3(2/2), Rs4(2/2), Rs5(1/2), Rs6(1/2), Rs7(5/5), Rs8(3/3), Rs9(1/1), T1(19/20), T2(51/51), Ts(2/2), U1(4/5), U2(10/11), U3(6/6), U4(6/6), U5(45/46), U6(38/39), U7(7/7), U8(3/3), Us1(3/3), Us2(1/2), Us3(3/3), V(52/52)
G	**C**	**G**	**C**	**T**	**A**	**T**	654	C(20/20), D1(2/2), D2s1(40/42), D2s10(1/1), D2s11(2/2), D2s12(1/1), D2s2(5/5), D2s3(1/1), D2s4(1/1), D2s5(1/1), D2s6(8/9), D2s7(5/5), D2s8(1/1), D2s9(1/1), D4a(42/43), D4b(18/19), D4s10(2/4), D4s11(1/1), D4s12(3/3), D4s13(1/1), D4s14(2/2), D4s3(1/1), D4s4(3/3), D4s5(52/53), D4s6(3/4), D4s7(8/8), D4s8(21/33), D4s9(8/10), D5(33/36), Ds1(1/1), Ds2(2/2), E(13/13), G(64/64), L1(2/32), L2a(33/34), L2b(7/7), L2c(8/8), L2d(2/2), L3a(18/19), L3s1(17/18), L3s2(5/5), M1(47/50), M10(7/7), M11(8/8), M2(7/7), M7a(45/47), M7b(34/36), M7c(6/7), M8a(11/11), Ms1(2/2), Ms2(1/1), Ms3(4/4), Ms4(2/2), Qs1(3/3), Qs2(3/6), Z(15/15)
A	T	G	T	C	G	C	186	Bs1(4/24), Bs2(29/38), J(95/98), K(50/70), P(3/18), Rs10(2/2), U2(1/11), U6(1/39), Us2(1/2)
A	T	A	T	T	G	T	176	A(53/54), HVs4(1/2), N1b(13/14), N9a(32/35), N9s(16/19), Ns1(1/1), Ns2(1/1), Ns4(5/6), Ns5(2/3), W(27/27), X(25/25)
G	C	G	C	T	G	T	51	L0(24/28), L1(27/32)
G	C	G	C	T	A	C	37	D2s1(2/42), D2s6(1/9), D4a(1/43), D4b(1/19), D4s10(2/4), D4s8(12/33), D4s9(2/10), D5(3/36), L0(1/28), L2a(1/34), L2s(1/1), M1(3/50), M7a(1/47), M7b(2/36), M7c(1/7), Qs2(3/6)
A	T	G	T	T	G	T	19	I(17/18), Ns6(2/2)
A	C	G	C	T	A	T	12	D4s2(11/12), M7a(1/47)
A	T	G	T	C	G	T	12	Bs2(7/38), K(5/70)
A	T	A	T	C	G	T	7	B4a(2/37), H5(1/15), N9s(1/19), P(1/18), Rs5(1/2), T1(1/20)
A	T	A	T	T	G	C	7	N1b(1/14), N9a(2/35), N9s(2/19), Ns4(1/6), Ns5(1/3)
A	T	G	T	T	G	C	7	Bs2(1/38), I(1/18), Y(5/5)
A	T	A	T	C	A	C	3	B4b(1/29), Bs1(1/24), U5(1/46)
G	C	A	C	T	G	C	3	L1(3/32)
G	T	A	T	C	G	C	3	H1(1/76), Rs6(1/2), U1(1/5)
G	C	G	C	T	G	C	2	L0(2/28)
G	C	G	T	T	A	T	2	D4s5(1/53), L3a(1/19)
G	T	A	T	T	G	T	2	A(1/54), N9a(1/35)
A	C	G	C	T	A	C	1	D4s2(1/12)

A	C	G	T	C	G	T		1 Bs2(1/38)
A	T	G	T	C	A	C		1 K(1/70)
G	C	A	C	T	G	T		1 L0(1/28)
G	C	G	C	A	A	T		1 D4s6(1/4)
G	C	G	C	C	A	T		1 L3s1(1/18)
G	T	A	T	T	G	C		1 HVs4(1/2)

B. $\alpha 2^*$

8701	9540	10398	12705	15301	16223	Occ	Occurs in haplogroups (# with variant/total)
A	T	A	C	G	C	727	B4a(35/37), B4b(28/29), Bs1(19/24), Bs3(1/1), F(56/56), H1(75/76), H10(6/6), H13(12/12), H2(11/11), H4(12/12), H5(14/15), H6(7/7), H7(12/12), HV1(2/2), HVs1(1/1), HVs2(13/13), HVs3(2/2), Hs1(20/20), Hs10(2/2), Hs11(7/7), Hs12(7/7), Hs13(2/2), Hs14(1/1), Hs16(2/2), Hs17(32/32), Hs18(1/1), Hs20(7/7), Hs21(2/2), Hs22(1/1), Hs23(1/1), Hs24(1/1), Hs25(3/3), Hs26(6/6), Hs28(2/2), Hs29(1/1), Hs3(1/1), Hs6(1/1), Hs7(2/2), Hs8(2/2), Hs9(1/1), J(3/98), K(14/70), P(14/18), R31(3/3), R5(10/10), Rs1(5/5), Rs2(2/2), Rs3(2/2), Rs4(2/2), Rs5(1/2), Rs6(1/2), Rs7(5/5), Rs8(3/3), Rs9(1/1), T1(19/20), T2(51/51), Ts(2/2), U1(4/5), U2(10/11), U3(6/6), U4(6/6), U5(45/46), U6(38/39), U7(7/7), U8(3/3), Us1(3/3), Us2(1/2), Us3(3/3), V(52/52)
G	**C**	**G**	**T**	**A**	**T**	656	C(20/20), D1(2/2), D2s1(40/42), D2s10(1/1), D2s11(2/2), D2s12(1/1), D2s2(5/5), D2s3(1/1), D2s4(1/1), D2s5(1/1), D2s6(8/9), D2s7(5/5), D2s8(1/1), D2s9(1/1), D4a(42/43), D4b(18/19), D4s10(2/4), D4s11(1/1), D4s12(3/3), D4s13(1/1), D4s14(2/2), D4s3(1/1), D4s4(3/3), D4s5(53/53), D4s6(3/4), D4s7(8/8), D4s8(21/33), D4s9(8/10), D5(33/36), Ds1(1/1), Ds2(2/2), E(13/13), G(64/64), L1(2/32), L2a(33/34), L2b(7/7), L2c(8/8), L2d(2/2), L3a(19/19), L3s1(17/18), L3s2(5/5), M1(47/50), M10(7/7), M11(8/8), M2(7/7), M7a(45/47), M7b(34/36), M7c(6/7), M8a(11/11), Ms1(2/2), Ms2(1/1), Ms3(4/4), Ms4(2/2), Qs1(3/3), Qs2(3/6), Z(15/15)
A	T	G	C	G	C	186	Bs1(4/24), Bs2(29/38), J(95/98), K(50/70), P(3/18), Rs10(2/2), U2(1/11), U6(1/39), Us2(1/2)
A	T	A	T	G	T	176	A(53/54), HVs4(1/2), N1b(13/14), N9a(32/35), N9s(16/19), Ns1(1/1), Ns2(1/1), Ns4(5/6), Ns5(2/3), W(27/27), X(25/25)
G	C	G	T	G	T	51	L0(24/28), L1(27/32)
G	C	G	T	A	C	37	D2s1(2/42), D2s6(1/9), D4a(1/43), D4b(1/19), D4s10(2/4), D4s8(12/33), D4s9(2/10), D5(3/36), L0(1/28), L2a(1/34), L2s(1/1), M1(3/50), M7a(1/47), M7b(2/36), M7c(1/7), Qs2(3/6)
A	T	G	T	G	T	19	I(17/18), Ns6(2/2)
A	C	G	T	A	T	12	Bs2(7/38), D4s2(11/12), K(5/70), M7a(1/47)
A	T	A	C	G	T	7	B4a(2/37), H5(1/15), N9s(1/19), P(1/18), Rs5(1/2), T1(1/20)
A	T	A	T	G	C	7	N1b(1/14), N9a(2/35), N9s(2/19), Ns4(1/6), Ns5(1/3)
A	T	G	T	G	C	7	Bs2(1/38), I(1/18), Y(5/5)
A	T	A	C	A	C	3	B4b(1/29), Bs1(1/24), U5(1/46)
G	C	A	T	G	C	3	L1(3/32)
G	T	A	C	G	C	3	H1(1/76), Rs6(1/2), U1(1/5)
G	C	G	T	G	C	2	L0(2/28)
G	T	A	T	G	T	2	A(1/54), N9a(1/35)
A	C	G	C	G	T	1	Bs2(1/38)
A	C	G	T	A	C	1	D4s2(1/12)
A	T	G	C	A	C	1	K(1/70)
G	C	A	T	G	T	1	L0(1/28)
G	C	G	A	A	T	1	D4s6(1/4)
G	C	G	C	A	T	1	L3s1(1/18)
G	T	A	T	G	C	1	HVs4(1/2)

C. α3

2352	8701	10398	Occ	Occurs in haplogroups (# with variant/total)
T	A	A	1292	A(76/77), B4a(37/37), B4b(45/45), Bs1(21/25), Bs3(1/1), F(56/56), H1(136/138), H10(10/10), H13(16/16), H2(28/28), H4(22/22), H5(26/26), H6(16/16), H7(17/18), HV1(3/3), HVs1(3/3), HVs2(19/19), HVs3(2/2), HVs4(1/2), Hs1(33/33), Hs10(2/2), Hs11(10/10), Hs12(8/8), Hs13(4/4), Hs14(3/3), Hs15(2/2), Hs16(2/2), Hs17(52/52), Hs18(2/2), Hs19(2/2), Hs2(2/2), Hs20(21/21), Hs21(4/4), Hs22(1/1), Hs23(2/2), Hs24(1/1), Hs25(6/6), Hs26(10/10), Hs27(1/1), Hs28(3/3), Hs29(1/1), Hs3(2/2), Hs6(1/1), Hs7(4/4), Hs8(3/3), Hs9(5/5), J(7/141), K(25/109), N1b(15/15), N9a(34/35), N9s(19/19), Ns1(1/1), Ns2(1/1), Ns4(6/6), Ns5(3/3), P(15/18), R31(3/3), R5(10/10), Rs1(5/5), Rs2(2/2), Rs3(2/2), Rs4(2/2), Rs5(2/2), Rs6(1/2), Rs7(5/5), Rs8(3/3), Rs9(2/2), T1(29/30), T2(85/85), Ts(2/2), U1(5/6), U2(17/18), U3(9/9), U4(12/12), U5(73/73), U6(38/41), U7(9/9), U8(3/3), Us1(3/3), Us2(1/2), Us3(3/3), V(58/58), W(35/35), X(25/25)
T	G	G	739	C(31/31), D1(11/11), D2s1(42/42), D2s10(1/1), D2s11(2/2), D2s12(1/1), D2s2(5/5), D2s3(1/1), D2s4(1/1), D2s5(1/1), D2s6(9/9), D2s7(5/5), D2s8(1/1), D2s9(1/1), D4a(43/43), D4b(19/19), D4s10(4/4), D4s11(1/1), D4s12(3/3), D4s13(1/1), D4s14(2/2), D4s3(1/1), D4s4(3/3), D4s5(53/53), D4s6(4/4), D4s7(8/8), D4s8(33/33), D4s9(10/10), D5(36/36), Ds1(1/1), Ds2(2/2), E(15/15), G(64/64), L0(27/28), L1(14/32), L2a(34/34), L2b(7/7), L2c(8/8), L2d(2/2), L2s(1/1), L3s1(18/18), L3s2(5/5), M1(51/51), M10(7/7), M11(8/8), M2(7/7), M7a(46/47), M7b(36/36), M7c(8/8), M8a(12/12), Ms1(2/2), Ms2(1/1), Ms3(4/4), Ms4(2/2), Qs1(3/3), Qs2(6/6), Z(15/15)
T	A	G	319	Bs1(4/25), Bs2(38/38), D4s2(12/12), I(31/31), J(134/141), K(83/109), M7a(1/47), Ns3(1/1), Ns6(2/2), P(3/18), Rs10(2/2), U2(1/18), U6(1/41), Us2(1/2), Y(5/5)
C	**G**	**G**	34	L1(15/32), L3a(19/19)
T	G	A	11	A(1/77), H1(1/138), HVs4(1/2), L0(1/28), L1(3/32), N9a(1/35), Rs6(1/2), T1(1/30), U1(1/6)
C	A	A	3	H1(1/138), U6(2/41)
C	A	G	1	K(1/109)
T	A	T	1	H7(1/18)

D. α4

7424	12705	Occ	Occurs in haplogroups (# with variant/total)
A	C	1350	B4a(37/37), B4b(45/45), Bs1(25/25), Bs2(37/38), Bs3(1/1), F(56/56), H1(138/138), H10(10/10), H13(16/16), H2(28/28), H4(22/22), H5(26/26), H6(16/16), H7(18/18), HV1(3/3), HVs1(3/3), HVs2(19/19), HVs3(2/2), Hs1(33/33), Hs10(2/2), Hs11(10/10), Hs12(8/8), Hs13(4/4), Hs14(3/3), Hs15(2/2), Hs16(2/2), Hs17(51/52), Hs18(2/2), Hs19(2/2), Hs2(2/2), Hs20(21/21), Hs21(4/4), Hs22(1/1), Hs23(2/2), Hs25(6/6), Hs26(10/10), Hs27(1/1), Hs28(3/3), Hs29(1/1), Hs3(2/2), Hs6(1/1), Hs7(4/4), Hs8(3/3), Hs9(5/5), J(141/141), K(109/109), L3s1(1/18), N9s(1/19), P(18/18), R31(3/3), R5(10/10), Rs1(5/5), Rs10(2/2), Rs2(2/2), Rs3(2/2), Rs4(2/2), Rs5(2/2), Rs6(2/2), Rs7(5/5), Rs8(3/3), Rs9(1/2), T1(30/30), T2(85/85), Ts(2/2), U1(6/6), U2(18/18), U3(9/9), U4(12/12), U5(73/73), U6(41/41), U7(9/9), U8(3/3), Us1(3/3), Us2(2/2), Us3(3/3), V(58/58)
A	T	1037	A(77/77), Bs2(1/38), C(31/31), D1(11/11), D2s1(42/42), D2s10(1/1), D2s11(2/2), D2s12(1/1), D2s2(5/5), D2s3(1/1), D2s4(1/1), D2s5(1/1), D2s6(9/9), D2s7(5/5), D2s8(1/1), D2s9(1/1), D4a(43/43), D4b(19/19), D4s10(4/4), D4s11(1/1), D4s12(3/3), D4s13(1/1), D4s14(2/2), D4s2(12/12), D4s3(1/1), D4s4(3/3), D4s5(53/53), D4s6(3/4), D4s7(8/8), D4s8(33/33), D4s9(10/10), D5(36/36), Ds1(1/1), Ds2(1/2), E(15/15), G(64/64), HVs4(2/2), I(31/31), L0(28/28), L1(32/32), L2a(34/34), L2b(7/7), L2c(8/8), L2d(2/2), L2s(1/1), L3a(19/19), L3s1(9/18), L3s2(5/5), M1(51/51), M10(7/7), M11(8/8), M2(7/7), M7a(47/47), M7b(36/36), M7c(8/8), M8a(12/12), Ms1(2/2), Ms2(1/1), Ms3(4/4), Ms4(2/2), N1b(15/15), N9a(35/35), N9s(18/19), Ns1(1/1), Ns2(1/1), Ns3(1/1), Ns4(6/6), Ns5(3/3), Ns6(2/2), Qs1(3/3), Qs2(6/6), W(35/35), X(25/25), Y(5/5), Z(15/15)
G	**T**	9	Ds2(1/2), L3s1(8/18)
G	C	3	Hs17(1/52), Hs24(1/1), Rs9(1/2)
A	A	1	D4s6(1/4)

E. α5*

12705	16311	Occ	Occurs in haplogroups (# with variant/total)
C	**T**	766	B4a(30/37), B4b(29/29), Bs1(9/24), Bs2(37/38), Bs3(1/1), F(30/56), H1(74/76), H10(6/6), H13(9/12), H2(10/11), H4(12/12), H5(14/15), H6(7/7), H7(12/12), Hs1(20/20), Hs10(2/2), Hs11(3/7), Hs12(7/7), Hs13(2/2), Hs14(1/1), Hs16(2/2), Hs17(28/32), Hs18(1/1), Hs20(6/7), Hs21(2/2), Hs22(1/1), Hs23(1/1), Hs25(3/3), Hs26(6/6), Hs28(1/2), Hs29(1/1), Hs3(1/1), Hs6(1/1), Hs7(2/2), Hs8(2/2), Hs9(1/1), HV1(2/2), HVs1(1/1), HVs2(8/13), HVs3(1/2), J(95/98), K(2/70), L3s1(1/18), N9s(1/19), P(15/18), R31(3/3), R5(8/10), Rs1(4/5), Rs2(1/2), Rs3(2/2), Rs4(2/2), Rs5(2/2), Rs6(2/2), Rs7(4/5), Rs8(3/3), T1(18/20), T2(51/51), Ts(2/2), U1(5/5), U2(10/11), U3(6/6), U4(6/6), U5(42/46), U6(29/39), U7(7/7), U8(3/3), Us1(3/3), Us2(1/2), Us3(2/3), V(50/52)
T	T	772	A(52/54), Bs2(1/38), C(19/20), D1(2/2), D2s1(40/42), D2s11(2/2), D2s12(1/1), D2s3(1/1), D2s4(1/1), D2s5(1/1), D2s6(7/9), D2s7(5/5), D2s8(1/1), D2s9(1/1), D4a(41/43), D4b(19/19), D4s10(4/4), D4s11(1/1), D4s12(3/3), D4s13(1/1), D4s14(2/2), D4s2(12/12), D4s4(3/3), D4s5(51/53), D4s6(3/4), D4s7(8/8), D4s8(32/33), D4s9(9/10), D5(33/36), Ds1(1/1), Ds2(1/2), E(13/13), G(63/64), HVs4(2/2), I(7/18), L0(1/28), L1(2/32), L2a(33/34), L2b(6/7), L2c(8/8), L2d(1/2), L3a(13/19), L3s1(13/18), M11(6/8), M2(6/7), M7a(47/47), M7b(35/36), M7c(7/7), M8a(7/11), Ms1(1/2), Ms4(2/2), N1b(13/14), N9a(34/35), N9s(17/19), Ns2(1/1), Ns4(6/6), Ns5(2/3), W(26/27), X(25/25), Y(3/5), Z(14/15)
T	**C**	203	A(2/54), C(1/20), D2s1(2/42), D2s10(1/1), D2s2(5/5), D2s6(2/9), D4a(2/43), D4s3(1/1), D4s5(2/53), D4s8(1/33), D4s9(1/10), D5(3/36), Ds2(1/2), G(1/64), I(11/18), L0(27/28), L1(30/32), L2a(1/34), L2b(1/7), L2d(1/2), L2s(1/1), L3a(6/19), L3s1(4/18), L3s2(5/5), M1(50/50), M10(7/7), M11(2/8), M2(1/7), M7b(1/36), M8a(4/11), Ms1(1/2), Ms2(1/1), Ms3(4/4), N1b(1/14), N9a(1/35), N9s(1/19), Ns1(1/1), Ns5(1/3), Ns6(2/2), Qs1(3/3), Qs2(6/6), W(1/27), Y(2/5), Z(1/15)
C	C	174	B4a(7/37), Bs1(15/24), F(26/56), H1(2/76), H13(3/12), H2(1/11), H5(1/15), Hs11(4/7), Hs17(4/32), Hs20(1/7), Hs24(1/1), Hs28(1/2), HVs2(5/13), HVs3(1/2), J(3/98), K(68/70), P(3/18), R5(2/10), Rs1(1/5), Rs10(2/2), Rs2(1/2), Rs7(1/5), Rs9(1/1), T1(2/20), U2(1/11), U5(4/46), U6(10/39), Us2(1/2), Us3(1/3), V(1/52)
A	T	1	D4s6(1/4)

F. α6

2706	4580	7028	15904	Occ	Occurs in haplogroups (# with variant/total)
G	G	T	C	1849	A(77/77), B4a(37/37), B4b(45/45), Bs1(24/25), Bs2(38/38), Bs3(1/1), C(31/31), D1(11/11), D2s1(42/42), D2s10(1/1), D2s11(2/2), D2s12(1/1), D2s2(5/5), D2s3(1/1), D2s4(1/1), D2s5(1/1), D2s6(9/9), D2s7(5/5), D2s8(1/1), D2s9(1/1), D4a(43/43), D4b(19/19), D4s10(4/4), D4s11(1/1), D4s12(3/3), D4s13(1/1), D4s14(2/2), D4s2(12/12), D4s3(1/1), D4s5(52/53), D4s6(4/4), D4s7(8/8), D4s8(33/33), D4s9(10/10), D5(36/36), Ds1(1/1), Ds2(2/2), E(15/15), F(55/56), G(64/64), HV1(3/3), HVs1(3/3), HVs2(19/19), HVs3(2/2), HVs4(2/2), I(31/31), J(137/141), K(109/109), L0(19/28), L1(32/32), L2a(34/34), L2b(7/7), L2c(8/8), L2d(2/2), L2s(1/1), L3a(19/19), L3s1(18/18), L3s2(5/5), M1(49/51), M10(7/7), M11(4/8), M2(7/7), M7a(47/47), M7b(36/36), M7c(8/8), M8a(12/12), Ms1(2/2), Ms2(1/1), Ms3(4/4), Ms4(2/2), N1b(15/15), N9a(35/35), N9s(19/19), Ns1(1/1), Ns2(1/1), Ns3(1/1), Ns4(6/6), Ns5(3/3), Ns6(2/2), P(18/18), Qs1(2/3), Qs2(6/6), R31(3/3), R5(10/10), Rs1(5/5), Rs10(2/2), Rs2(2/2), Rs3(2/2), Rs4(2/2), Rs5(2/2), Rs6(2/2), Rs7(5/5), Rs8(3/3), Rs9(2/2), T1(30/30), T2(83/85), Ts(2/2), U1(6/6), U2(18/18), U3(8/9), U4(12/12), U5(73/73), U6(41/41), U7(9/9), U8(3/3), Us2(2/2), Us3(3/3), W(35/35), X(25/25), Y(5/5), Z(15/15)
A	G	C	C	463	H1(138/138), H10(10/10), H13(15/16), H2(28/28), H4(22/22), H5(26/26), H6(16/16), H7(18/18), Hs1(33/33), Hs10(2/2), Hs11(10/10), Hs12(8/8), Hs13(4/4), Hs14(3/3), Hs15(2/2), Hs16(2/2), Hs17(52/52), Hs18(2/2), Hs19(2/2), Hs2(2/2), Hs20(21/21), Hs21(4/4), Hs22(1/1), Hs23(2/2), Hs24(1/1), Hs25(6/6), Hs26(10/10), Hs27(1/1), Hs28(3/3), Hs3(2/2), Hs6(1/1), Hs7(4/4), Hs8(3/3), Hs9(5/5), M11(4/8)
G	**A**	**T**	**T**	57	V(57/58)

A	G	T	C	23	Bs1(1/25), D4s4(3/3), D4s5(1/53), F(1/56), J(3/141), L0(9/28), M1(2/51), Us1(3/3)
G	G	C	C	6	H13(1/16), Hs29(1/1), J(1/141), Qs1(1/3), T2(1/85), U3(1/9)
G	G	T	T	1	V(1/58)

G. α7

2706	7028	8701	10398	Occ	Occurs in haplogroups (# with variant/total)
G	T	A	A	828	A(76/77), B4a(37/37), B4b(45/45), Bs1(20/25), Bs3(1/1), F(55/56), HV1(3/3), HVs1(3/3), HVs2(19/19), HVs3(2/2), HVs4(1/2), J(7/141), K(25/109), N1b(15/15), N9a(34/35), N9s(19/19), Ns1(1/1), Ns2(1/1), Ns4(6/6), Ns5(3/3), P(15/18), R31(3/3), R5(10/10), Rs1(5/5), Rs2(2/2), Rs3(2/2), Rs4(2/2), Rs5(2/2), Rs6(1/2), Rs7(5/5), Rs8(3/3), Rs9(2/2), T1(29/30), T2(83/85), Ts(2/2), U1(5/6), U2(17/18), U3(8/9), U4(12/12), U5(73/73), U6(40/41), U7(9/9), U8(3/3), Us2(1/2), Us3(3/3), V(58/58), W(35/35), X(25/25)
G	**T**	**G**	**G**	754	C(31/31), D1(11/11), D2s1(42/42), D2s10(1/1), D2s11(2/2), D2s12(1/1), D2s2(5/5), D2s3(1/1), D2s4(1/1), D2s5(1/1), D2s6(9/9), D2s7(5/5), D2s8(1/1), D2s9(1/1), D4a(43/43), D4b(19/19), D4s10(4/4), D4s11(1/1), D4s12(3/3), D4s13(1/1), D4s14(2/2), D4s3(1/1), D4s5(52/53), D4s6(4/4), D4s7(8/8), D4s8(33/33), D4s9(10/10), D5(36/36), Ds1(1/1), Ds2(2/2), E(15/15), G(64/64), L0(19/28), L1(29/32), L2a(34/34), L2b(7/7), L2c(8/8), L2d(2/2), L2s(1/1), L3a(19/19), L3s1(18/18), L3s2(5/5), M1(49/51), M10(7/7), M11(4/8), M2(7/7), M7a(46/47), M7b(36/36), M7c(8/8), M8a(12/12), Ms1(2/2), Ms2(1/1), Ms3(4/4), Ms4(2/2), Qs1(2/3), Qs2(6/6), Z(15/15)
A	C	A	A	457	H1(137/138), H10(10/10), H13(15/16), H2(28/28), H4(22/22), H5(26/26), H6(16/16), H7(17/18), Hs1(33/33), Hs10(2/2), Hs11(10/10), Hs12(8/8), Hs13(4/4), Hs14(3/3), Hs15(2/2), Hs16(2/2), Hs17(52/52), Hs18(2/2), Hs19(2/2), Hs2(2/2), Hs20(21/21), Hs21(4/4), Hs22(1/1), Hs23(2/2), Hs24(1/1), Hs25(6/6), Hs26(10/10), Hs27(1/1), Hs28(3/3), Hs3(2/2), Hs6(1/1), Hs7(4/4), Hs8(3/3), Hs9(5/5)
G	T	A	G	316	Bs1(4/25), Bs2(38/38), D4s2(12/12), I(31/31), J(130/141), K(84/109), M7a(1/47), Ns3(1/1), Ns6(2/2), P(3/18), Rs10(2/2), U2(1/18), U6(1/41), Us2(1/2), Y(5/5)
A	T	G	G	14	D4s4(3/3), D4s5(1/53), L0(8/28), M1(2/51)
G	T	G	A	9	A(1/77), HVs4(1/2), L1(3/32), N9a(1/35), Rs6(1/2), T1(1/30), U1(1/6)
A	T	A	A	5	Bs1(1/25), F(1/56), Us1(3/3)
A	C	G	G	4	M11(4/8)
G	C	A	A	4	H13(1/16), Hs29(1/1), T2(1/85), U3(1/9)
A	T	A	G	3	J(3/141)
A	C	A	T	1	H7(1/18)
A	C	G	A	1	H1(1/138)
A	T	G	A	1	L0(1/28)
G	C	A	G	1	J(1/141)
G	C	G	G	1	Qs1(1/3)

H. α8

2706	7028	10398	Occ	Occurs in haplogroups (# with variant/total)
G	**T**	**G**	1070	Bs1(4/25), Bs2(38/38), C(31/31), D1(11/11), D2s1(42/42), D2s10(1/1), D2s11(2/2), D2s12(1/1), D2s2(5/5), D2s3(1/1), D2s4(1/1), D2s5(1/1), D2s6(9/9), D2s7(5/5), D2s8(1/1), D2s9(1/1), D4a(43/43), D4b(19/19), D4s10(4/4), D4s11(1/1), D4s12(3/3), D4s13(1/1), D4s14(2/2), D4s2(12/12), D4s3(1/1), D4s5(52/53), D4s6(4/4), D4s7(8/8), D4s8(33/33), D4s9(10/10), D5(36/36), Ds1(1/1), Ds2(2/2), E(15/15), G(64/64), I(31/31), J(130/141), K(84/109), L0(19/28), L1(29/32), L2a(34/34), L2b(7/7), L2c(8/8), L2d(2/2), L2s(1/1), L3a(19/19), L3s1(18/18), L3s2(5/5), M1(49/51), M10(7/7), M11(4/8), M2(7/7), M7a(47/47), M7b(36/36), M7c(8/8), M8a(12/12), Ms1(2/2), Ms2(1/1), Ms3(4/4), Ms4(2/2), Ns3(1/1), Ns6(2/2), P(3/18), Qs1(2/3), Qs2(6/6), Rs10(2/2), U2(1/18), U6(1/41), Us2(1/2), Y(5/5), Z(15/15)

G	T	A	837	A(77/77), B4a(37/37), B4b(45/45), Bs1(20/25), Bs3(1/1), F(55/56), HV1(3/3), HVs1(3/3), HVs2(19/19), HVs3(2/2), HVs4(2/2), J(7/141), K(25/109), L1(3/32), N1b(15/15), N9a(35/35), N9s(19/19), Ns1(1/1), Ns2(1/1), Ns4(6/6), Ns5(3/3), P(15/18), R31(3/3), R5(10/10), Rs1(5/5), Rs2(2/2), Rs3(2/2), Rs4(2/2), Rs5(2/2), Rs6(2/2), Rs7(5/5), Rs8(3/3), Rs9(2/2), T1(30/30), T2(83/85), Ts(2/2), U1(6/6), U2(17/18), U3(8/9), U4(12/12), U5(73/73), U6(40/41), U7(9/9), U8(3/3), Us2(1/2), Us3(3/3), V(58/58), W(35/35), X(25/25)
A	C	A	458	H1(138/138), H10(10/10), H13(15/16), H2(28/28), H4(22/22), H5(26/26), H6(16/16), H7(17/18), Hs1(33/33), Hs10(2/2), Hs11(10/10), Hs12(8/8), Hs13(4/4), Hs14(3/3), Hs15(2/2), Hs16(2/2), Hs17(52/52), Hs18(2/2), Hs19(2/2), Hs2(2/2), Hs20(21/21), Hs21(4/4), Hs22(1/1), Hs23(2/2), Hs24(1/1), Hs25(6/6), Hs26(10/10), Hs27(1/1), Hs28(3/3), Hs3(2/2), Hs6(1/1), Hs7(4/4), Hs8(3/3), Hs9(5/5)
A	T	G	17	D4s4(3/3), D4s5(1/53), J(3/141), L0(8/28), M1(2/51)
A	T	A	6	Bs1(1/25), F(1/56), L0(1/28), Us1(3/3)
A	C	G	4	M11(4/8)
G	C	A	4	H13(1/16), Hs29(1/1), T2(1/85), U3(1/9)
G	C	G	2	J(1/141), Qs1(1/3)
A	C	T	1	H7(1/18)

I. α9

2706	7028	Occ	Occurs in haplogroups (# with variant/total)
G	**T**	1907	A(77/77), B4a(37/37), B4b(45/45), Bs1(24/25), Bs2(38/38), Bs3(1/1), C(31/31), D1(11/11), D2s1(42/42), D2s10(1/1), D2s11(2/2), D2s12(1/1), D2s2(5/5), D2s3(1/1), D2s4(1/1), D2s5(1/1), D2s6(9/9), D2s7(5/5), D2s8(1/1), D2s9(1/1), D4a(43/43), D4b(19/19), D4s10(4/4), D4s11(1/1), D4s12(3/3), D4s13(1/1), D4s14(2/2), D4s2(12/12), D4s3(1/1), D4s5(52/53), D4s6(4/4), D4s7(8/8), D4s8(33/33), D4s9(10/10), D5(36/36), Ds1(1/1), Ds2(2/2), E(15/15), F(55/56), G(64/64), HV1(3/3), HVs1(3/3), HVs2(19/19), HVs3(2/2), HVs4(2/2), I(31/31), J(137/141), K(109/109), L0(19/28), L1(32/32), L2a(34/34), L2b(7/7), L2c(8/8), L2d(2/2), L2s(1/1), L3a(19/19), L3s1(18/18), L3s2(5/5), M1(49/51), M10(7/7), M11(4/8), M2(7/7), M7a(47/47), M7b(36/36), M7c(8/8), M8a(12/12), Ms1(2/2), Ms2(1/1), Ms3(4/4), Ms4(2/2), N1b(15/15), N9a(35/35), N9s(19/19), Ns1(1/1), Ns2(1/1), Ns3(1/1), Ns4(6/6), Ns5(3/3), Ns6(2/2), P(18/18), Qs1(2/3), Qs2(6/6), R31(3/3), R5(10/10), Rs1(5/5), Rs10(2/2), Rs2(2/2), Rs3(2/2), Rs4(2/2), Rs5(2/2), Rs6(2/2), Rs7(5/5), Rs8(3/3), Rs9(2/2), T1(30/30), T2(83/85), Ts(2/2), U1(6/6), U2(18/18), U3(8/9), U4(12/12), U5(73/73), U6(41/41), U7(9/9), U8(3/3), Us2(2/2), Us3(3/3), V(58/58), W(35/35), X(25/25), Y(5/5), Z(15/15)
A	C	463	H1(138/138), H10(10/10), H13(15/16), H2(28/28), H4(22/22), H5(26/26), H6(16/16), H7(18/18), Hs1(33/33), Hs10(2/2), Hs11(10/10), Hs12(8/8), Hs13(4/4), Hs14(3/3), Hs15(2/2), Hs16(2/2), Hs17(52/52), Hs18(2/2), Hs19(2/2), Hs2(2/2), Hs20(21/21), Hs21(4/4), Hs22(1/1), Hs23(2/2), Hs24(1/1), Hs25(6/6), Hs26(10/10), Hs27(1/1), Hs28(3/3), Hs3(2/2), Hs6(1/1), Hs7(4/4), Hs8(3/3), Hs9(5/5), M11(4/8)
A	T	23	Bs1(1/25), D4s4(3/3), D4s5(1/53), F(1/56), J(3/141), L0(9/28), M1(2/51), Us1(3/3)
G	C	6	H13(1/16), Hs29(1/1), J(1/141), Qs1(1/3), T2(1/85), U3(1/9)

J. α10

4639	7028	Occ	Occurs in haplogroups (# with variant/total)
T	T	1916	A(77/77), B4a(37/37), B4b(44/45), Bs1(25/25), Bs2(38/38), Bs3(1/1), C(31/31), D1(11/11), D2s1(42/42), D2s10(1/1), D2s11(2/2), D2s12(1/1), D2s2(5/5), D2s4(1/1), D2s5(1/1), D2s6(9/9), D2s7(5/5), D2s8(1/1), D2s9(1/1), D4a(43/43), D4b(19/19), D4s10(4/4), D4s11(1/1), D4s12(3/3), D4s13(1/1), D4s14(2/2), D4s2(12/12), D4s3(1/1), D4s4(3/3), D4s5(53/53), D4s6(4/4), D4s7(8/8), D4s8(33/33), D4s9(10/10), D5(36/36), Ds1(1/1), Ds2(2/2), E(15/15), F(56/56), G(64/64), HV1(3/3), HVs1(3/3), HVs2(19/19), HVs3(2/2), HVs4(2/2), I(31/31), J(140/141), K(109/109), L0(28/28), L1(32/32), L2a(34/34), L2b(7/7), L2c(8/8), L2d(2/2), L2s(1/1), L3a(19/19), L3s1(18/18), L3s2(5/5), M1(51/51), M10(7/7), M11(4/8), M2(7/7), M7a(47/47), M7b(36/36), M7c(8/8), M8a(12/12), Ms1(2/2), Ms2(1/1), Ms3(4/4), Ms4(2/2), N1b(15/15), N9a(35/35), N9s(19/19), Ns1(1/1), Ns2(1/1), Ns3(1/1), Ns4(6/6), Ns5(3/3), Ns6(2/2), P(18/18), Qs1(1/3), Qs2(6/6), R31(3/3), R5(10/10), Rs1(5/5), Rs10(2/2), Rs2(2/2), Rs3(2/2), Rs4(2/2), Rs5(2/2), Rs6(2/2), Rs7(5/5), Rs8(3/3), Rs9(2/2), T1(30/30), T2(83/85), Ts(2/2), U1(6/6), U2(18/18), U3(8/9), U4(12/12), U5(73/73), U6(41/41), U7(9/9), U8(3/3), Us1(3/3), Us2(2/2), Us3(3/3), V(47/58), W(35/35), X(25/25), Y(5/5), Z(15/15)
T	**C**	467	H1(136/138), H10(10/10), H13(16/16), H2(28/28), H4(22/22), H5(26/26), H6(16/16), H7(18/18), Hs1(33/33), Hs10(2/2), Hs11(10/10), Hs12(8/8), Hs13(4/4), Hs14(3/3), Hs15(2/2), Hs16(2/2), Hs17(52/52), Hs18(2/2), Hs19(2/2), Hs2(2/2), Hs20(21/21), Hs21(4/4), Hs22(1/1), Hs23(2/2), Hs24(1/1), Hs25(6/6), Hs26(10/10), Hs27(1/1), Hs28(3/3), Hs29(1/1), Hs3(2/2), Hs6(1/1), Hs7(4/4), Hs8(3/3), Hs9(5/5), J(1/141), M11(4/8), Qs1(1/3), T2(1/85), U3(1/9)
C	**T**	14	B4b(1/45), D2s3(1/1), Qs1(1/3), V(11/58)
C	C	2	H1(2/138)

K. β1*

1811	4646	12308	12372	14620	15693	16356	Occ	Occurs in haplogroups (# with variant/total)
A	T	A	G	C	T	T	1648	A(53/54), B4a(37/37), B4b(29/29), Bs1(24/24), Bs2(38/38), Bs3(1/1), C(18/20), D1(2/2), D2s1(42/42), D2s10(1/1), D2s11(2/2), D2s12(1/1), D2s2(5/5), D2s3(1/1), D2s4(1/1), D2s5(1/1), D2s6(9/9), D2s7(5/5), D2s8(1/1), D2s9(1/1), D4a(42/43), D4b(19/19), D4s10(4/4), D4s11(1/1), D4s12(3/3), D4s13(1/1), D4s14(2/2), D4s2(12/12), D4s3(1/1), D4s4(3/3), D4s5(52/53), D4s6(4/4), D4s7(4/8), D4s8(32/33), D4s9(10/10), D5(36/36), Ds1(1/1), Ds2(2/2), E(13/13), F(56/56), G(64/64), H1(73/76), H10(6/6), H13(12/12), H2(11/11), H4(12/12), H5(15/15), H6(7/7), H7(12/12), HV1(2/2), HVs1(1/1), HVs2(12/13), HVs3(2/2), HVs4(2/2), Hs1(20/20), Hs10(2/2), Hs11(7/7), Hs12(7/7), Hs13(2/2), Hs14(1/1), Hs16(2/2), Hs17(32/32), Hs18(1/1), Hs20(7/7), Hs21(2/2), Hs22(1/1), Hs23(1/1), Hs24(1/1), Hs25(3/3), Hs26(5/6), Hs28(2/2), Hs29(1/1), Hs3(1/1), Hs6(1/1), Hs7(2/2), Hs8(2/2), Hs9(1/1), I(18/18), J(96/98), L0(27/28), L1(32/32), L2a(34/34), L2b(7/7), L2c(8/8), L2d(2/2), L2s(1/1), L3a(18/19), L3s1(18/18), L3s2(5/5), M1(50/50), M10(7/7), M11(8/8), M2(7/7), M7a(47/47), M7b(36/36), M7c(7/7), M8a(11/11), Ms1(1/2), Ms3(4/4), Ms4(2/2), N1b(13/14), N9s(19/19), Ns1(1/1), Ns4(4/6), Ns5(3/3), Ns6(2/2), P(18/18), Qs1(3/3), Qs2(6/6), R31(2/3), R5(2/10), Rs1(5/5), Rs10(2/2), Rs2(2/2), Rs3(2/2), Rs4(2/2), Rs5(2/2), Rs6(2/2), Rs7(5/5), Rs8(3/3), Rs9(1/1), T1(20/20), T2(51/51), Ts(2/2), U1(1/5), V(52/52), W(27/27), X(25/25), Y(5/5), Z(15/15)
G	T	G	A	C	T	T	104	K(70/70), U2(11/11), U3(5/6), U7(7/7), U8(3/3), Us1(3/3), Us2(2/2), Us3(3/3)
A	T	G	A	C	T	T	89	U1(4/5), U5(46/46), U6(39/39)
A	T	A	A	C	T	T	41	D4s7(4/8), Ms1(1/2), N1b(1/14), N9a(35/35)
A	T	A	G	C	T	C	19	A(1/54), C(2/20), D4s8(1/33), H1(3/76), HVs2(1/13), Ms2(1/1), Ns2(1/1), Ns4(1/6), R5(8/10)
G	**C**	**G**	**A**	**T**	**C**	**C**	6	U4(6/6)

G	T	A	G	C	T	T	5	D4a(1/43), J(2/98), Ns4(1/6), R31(1/3)
A	C	A	G	C	T	T	2	D4s5(1/53), Hs26(1/6)
G	T	G	A	C	T	C	1	U3(1/6)
A	T	A	G	C	C	T	1	L3a(1/19)
A	T	A	G	T	T	T	1	L0(1/28)

L. β2

1811	15693	Occ	Occurs in haplogroups (# with variant/total)
A	T	2227	A(77/77), B4a(37/37), B4b(45/45), Bs1(25/25), Bs2(38/38), Bs3(1/1), C(31/31), D1(11/11), D2s1(42/42), D2s10(1/1), D2s11(2/2), D2s12(1/1), D2s2(5/5), D2s3(1/1), D2s4(1/1), D2s5(1/1), D2s6(9/9), D2s7(5/5), D2s8(1/1), D2s9(1/1), D4a(42/43), D4b(19/19), D4s10(4/4), D4s11(1/1), D4s12(3/3), D4s13(1/1), D4s14(2/2), D4s2(12/12), D4s3(1/1), D4s4(3/3), D4s5(53/53), D4s6(4/4), D4s7(8/8), D4s8(33/33), D4s9(10/10), D5(36/36), Ds1(1/1), Ds2(2/2), E(15/15), F(56/56), G(64/64), H1(138/138), H10(10/10), H13(16/16), H2(28/28), H4(22/22), H5(26/26), H6(16/16), H7(18/18), HV1(3/3), HVs1(3/3), HVs2(19/19), HVs3(2/2), HVs4(2/2), Hs1(33/33), Hs10(2/2), Hs11(10/10), Hs12(8/8), Hs13(4/4), Hs14(3/3), Hs15(2/2), Hs16(2/2), Hs17(52/52), Hs18(2/2), Hs19(2/2), Hs2(2/2), Hs20(21/21), Hs21(4/4), Hs22(1/1), Hs23(2/2), Hs24(1/1), Hs25(6/6), Hs26(10/10), Hs27(1/1), Hs28(3/3), Hs29(1/1), Hs3(2/2), Hs6(1/1), Hs7(4/4), Hs8(3/3), Hs9(5/5), I(31/31), J(139/141), K(1/109), L0(28/28), L1(32/32), L2a(34/34), L2b(7/7), L2c(8/8), L2d(2/2), L2s(1/1), L3a(18/19), L3s1(18/18), L3s2(5/5), M1(51/51), M10(7/7), M11(8/8), M2(7/7), M7a(47/47), M7b(36/36), M7c(8/8), M8a(12/12), Ms1(2/2), Ms2(1/1), Ms3(4/4), Ms4(2/2), N1b(15/15), N9a(35/35), N9s(19/19), Ns1(1/1), Ns2(1/1), Ns3(1/1), Ns4(5/6), Ns5(3/3), Ns6(2/2), P(18/18), Qs1(3/3), Qs2(6/6), R31(2/3), R5(10/10), Rs1(5/5), Rs10(2/2), Rs2(2/2), Rs3(2/2), Rs4(2/2), Rs5(2/2), Rs6(2/2), Rs7(5/5), Rs8(3/3), Rs9(2/2), T1(30/30), T2(85/85), Ts(2/2), U1(6/6), U5(73/73), U6(41/41), V(58/58), W(35/35), X(25/25), Y(5/5), Z(15/15)
G	T	160	D4a(1/43), J(2/141), K(108/109), Ns4(1/6), R31(1/3), U2(18/18), U3(9/9), U7(9/9), U8(3/3), Us1(3/3), Us2(2/2), Us3(3/3)
G	**C**	12	U4(12/12)
A	C	1	L3a(1/19)

M. β3

12308	12372	Occ	Occurs in haplogroups (# with variant/total)
A	G	2071	A(77/77), B4a(37/37), B4b(45/45), Bs1(25/25), Bs2(38/38), Bs3(1/1), C(30/31), D1(11/11), D2s1(42/42), D2s10(1/1), D2s11(2/2), D2s12(1/1), D2s2(5/5), D2s3(1/1), D2s4(1/1), D2s5(1/1), D2s6(9/9), D2s7(5/5), D2s8(1/1), D2s9(1/1), D4a(43/43), D4b(19/19), D4s10(4/4), D4s11(1/1), D4s12(3/3), D4s13(1/1), D4s14(2/2), D4s2(12/12), D4s3(1/1), D4s4(3/3), D4s5(53/53), D4s6(4/4), D4s7(4/8), D4s8(33/33), D4s9(10/10), D5(36/36), Ds1(1/1), Ds2(2/2), E(15/15), F(56/56), G(64/64), H1(138/138), H10(10/10), H13(16/16), H2(28/28), H4(22/22), H5(26/26), H6(16/16), H7(18/18), HV1(3/3), HVs1(3/3), HVs2(19/19), HVs3(2/2), HVs4(2/2), Hs1(33/33), Hs10(2/2), Hs11(10/10), Hs12(8/8), Hs13(4/4), Hs14(3/3), Hs15(2/2), Hs16(2/2), Hs17(52/52), Hs18(2/2), Hs19(2/2), Hs2(2/2), Hs20(21/21), Hs21(4/4), Hs22(1/1), Hs23(2/2), Hs24(1/1), Hs25(6/6), Hs26(10/10), Hs27(1/1), Hs28(3/3), Hs29(1/1), Hs3(2/2), Hs6(1/1), Hs7(4/4), Hs8(3/3), Hs9(5/5), I(31/31), J(141/141), L0(28/28), L1(32/32), L2a(34/34), L2b(7/7), L2c(8/8), L2d(2/2), L2s(1/1), L3a(19/19), L3s1(18/18), L3s2(5/5), M1(51/51), M10(7/7), M11(8/8), M2(7/7), M7a(47/47), M7b(36/36), M7c(8/8), M8a(12/12), Ms1(1/2), Ms2(1/1), Ms3(4/4), Ms4(2/2), N1b(14/15), N9s(19/19), Ns1(1/1), Ns2(1/1), Ns3(1/1), Ns4(6/6), Ns5(3/3), Ns6(2/2), P(18/18), Qs1(3/3), Qs2(6/6), R31(3/3), R5(10/10), Rs1(5/5), Rs10(2/2), Rs2(2/2), Rs3(2/2), Rs4(2/2), Rs5(2/2), Rs6(2/2), Rs7(5/5), Rs8(3/3), Rs9(2/2), T1(30/30), T2(85/85), Ts(2/2), U1(1/6), V(58/58), W(35/35), X(25/25), Y(5/5), Z(15/15)
G	**A**	287	K(109/109), U1(5/6), U2(18/18), U3(9/9), U4(12/12), U5(73/73), U6(41/41), U7(9/9), U8(3/3), Us1(3/3), Us2(2/2), Us3(3/3)
A	A	42	C(1/31), D4s7(4/8), Ms1(1/2), N1b(1/15), N9a(35/35)

N. $\beta 4^*$

1811	15693	16134	Occ	Occurs in haplogroups (# with variant/total)
A	T	C	1798	A(54/54), B4a(37/37), B4b(29/29), Bs1(24/24), Bs2(38/38), Bs3(1/1), C(20/20), D1(2/2), D2s1(42/42), D2s10(1/1), D2s11(2/2), D2s12(1/1), D2s2(5/5), D2s3(1/1), D2s4(1/1), D2s5(1/1), D2s6(9/9), D2s7(5/5), D2s8(1/1), D2s9(1/1), D4a(42/43), D4b(19/19), D4s10(4/4), D4s11(1/1), D4s12(3/3), D4s13(1/1), D4s14(2/2), D4s2(12/12), D4s3(1/1), D4s4(3/3), D4s5(53/53), D4s6(4/4), D4s7(8/8), D4s8(33/33), D4s9(10/10), D5(36/36), Ds1(1/1), Ds2(2/2), E(13/13), F(56/56), G(64/64), H1(76/76), H10(6/6), H13(12/12), H2(11/11), H4(12/12), H5(15/15), H6(7/7), H7(12/12), HV1(2/2), HVs1(1/1), HVs2(13/13), HVs3(2/2), HVs4(2/2), Hs1(20/20), Hs10(2/2), Hs11(7/7), Hs12(7/7), Hs13(2/2), Hs14(1/1), Hs16(2/2), Hs17(32/32), Hs18(1/1), Hs20(7/7), Hs21(2/2), Hs22(1/1), Hs23(1/1), Hs24(1/1), Hs25(3/3), Hs26(6/6), Hs28(2/2), Hs29(1/1), Hs3(1/1), Hs6(1/1), Hs7(2/2), Hs8(2/2), Hs9(1/1), I(18/18), J(96/98), L0(28/28), L1(32/32), L2a(34/34), L2b(7/7), L2c(8/8), L2d(2/2), L2s(1/1), L3a(18/19), L3s1(18/18), L3s2(5/5), M1(50/50), M10(7/7), M11(8/8), M2(7/7), M7a(47/47), M7b(36/36), M7c(7/7), M8a(11/11), Ms1(2/2), Ms2(1/1), Ms3(4/4), Ms4(2/2), N1b(14/14), N9a(35/35), N9s(19/19), Ns1(1/1), Ns2(1/1), Ns4(5/6), Ns5(3/3), Ns6(2/2), P(18/18), Qs1(3/3), Qs2(6/6), R31(2/3), R5(10/10), Rs1(5/5), Rs10(2/2), Rs2(2/2), Rs3(2/2), Rs4(2/2), Rs5(2/2), Rs6(2/2), Rs7(5/5), Rs8(3/3), Rs9(1/1), T1(20/20), T2(51/51), Ts(2/2), U1(5/5), U5(46/46), U6(37/39), V(52/52), W(27/27), X(25/25), Y(5/5), Z(15/15)
G	T	C	110	D4a(1/43), J(2/98), K(70/70), Ns4(1/6), R31(1/3), U2(11/11), U3(6/6), U7(7/7), U8(3/3), Us1(3/3), Us2(2/2), Us3(3/3)
G	C	C	6	U4(6/6)
A	T	T	2	U6(2/39)
A	C	C	1	L3a(1/19)

O. $\gamma 1^*$

94	630	Occ	Occurs in haplogroups (# with variant/total)
G	C	1903	A(54/54), B4a(37/37), B4b(29/29), Bs1(24/24), Bs2(38/38), Bs3(1/1), C(20/20), D1(2/2), D2s1(36/42), D2s10(1/1), D2s11(1/2), D2s12(1/1), D2s2(5/5), D2s3(1/1), D2s4(1/1), D2s5(1/1), D2s6(9/9), D2s7(5/5), D2s8(1/1), D2s9(1/1), D4a(43/43), D4b(19/19), D4s10(4/4), D4s11(1/1), D4s12(3/3), D4s13(1/1), D4s14(2/2), D4s2(12/12), D4s3(1/1), D4s4(3/3), D4s5(53/53), D4s6(4/4), D4s7(8/8), D4s8(33/33), D4s9(10/10), D5(36/36), Ds1(1/1), Ds2(2/2), E(13/13), F(55/56), G(64/64), H1(76/76), H10(6/6), H13(12/12), H2(11/11), H4(12/12), H5(15/15), H6(7/7), H7(12/12), HV1(2/2), HVs1(1/1), HVs2(13/13), HVs3(2/2), HVs4(2/2), Hs1(20/20), Hs10(2/2), Hs11(7/7), Hs12(7/7), Hs13(2/2), Hs14(1/1), Hs16(2/2), Hs17(32/32), Hs18(1/1), Hs20(7/7), Hs21(2/2), Hs22(1/1), Hs23(1/1), Hs24(1/1), Hs25(3/3), Hs26(6/6), Hs28(2/2), Hs29(1/1), Hs3(1/1), Hs6(1/1), Hs7(2/2), Hs8(2/2), Hs9(1/1), I(18/18), J(98/98), K(69/70), L0(28/28), L1(32/32), L2a(34/34), L2b(7/7), L2c(8/8), L2d(2/2), L2s(1/1), L3a(19/19), L3s1(18/18), L3s2(5/5), M1(50/50), M10(7/7), M11(8/8), M2(7/7), M7a(47/47), M7b(36/36), M7c(7/7), M8a(11/11), Ms1(2/2), Ms2(1/1), Ms3(4/4), Ms4(2/2), N1b(14/14), N9a(35/35), N9s(14/19), Ns1(1/1), Ns2(1/1), Ns4(6/6), Ns5(3/3), Ns6(2/2), P(18/18), Qs1(3/3), Qs2(6/6), R31(3/3), R5(10/10), Rs1(5/5), Rs10(2/2), Rs2(2/2), Rs3(2/2), Rs4(2/2), Rs5(2/2), Rs6(2/2), Rs7(5/5), Rs8(3/3), Rs9(1/1), T1(20/20), T2(51/51), Ts(2/2), U1(5/5), U2(11/11), U3(6/6), U4(6/6), U5(46/46), U6(39/39), U7(7/7), U8(3/3), Us1(3/3), Us2(2/2), Us3(3/3), V(52/52), W(27/27), X(25/25), Y(5/5), Z(15/15)
A	C	14	D2s1(6/42), D2s11(1/2), F(1/56), K(1/70), N9s(5/19)

References for the Supplementary Online Material

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