

Hg ^b	Haplotype		Populations ^a										
	RFLP ^{c,d}	HVS-I data ^d	VUF	Fin	Est	Sik	Fre	Blk	Tur	NE	Asia	ESlav	Total
H1f	-3007 <i>Bsh</i> 1236I, +4449 <i>Mbo</i> I,+9066 <i>Eco</i> 32I	93-183d-189	3										3
H1f	-3007 <i>Bsh</i> 1236I, +4449 <i>Mbo</i> I,+9066 <i>Eco</i> 32I	189										1	1
H2*	+4769 <i>Alu</i> I	274	1										1
H2*	+4769 <i>Alu</i> I	291-235			1								1
H2*	+4769 <i>Alu</i> I	291	1										1
H2*	+4769 <i>Alu</i> I	311					1						1
H2*	+4769 <i>Alu</i> I	CRS					1			1	1		3
H2*	+73 <i>Alw</i> 44I,+4769 <i>Alu</i> I	CRS							1				1
H2	G951A,-4769 <i>Alu</i> I,A4769G	CRS				1							1
H2a	-951 <i>Mbo</i> I,+4769 <i>Alu</i> I	93										1	1
H2a	-951 <i>Mbo</i> I,+4769 <i>Alu</i> I	CRS										1	1
H2a1	-951 <i>Mbo</i> I,+4769 <i>Alu</i> I	79-311-354								1			1
H2a1	-951 <i>Mbo</i> I,+4769 <i>Alu</i> I	93-193-354										1	1
H2a1	-951 <i>Mbo</i> I,+4769 <i>Alu</i> I	167-354										1	1
H2a1	-951 <i>Mbo</i> I,+4769 <i>Alu</i> I	178-354	1										1
H2a1	-951 <i>Mbo</i> I,+4769 <i>Alu</i> I	193-354			1						3		4
H2a1	-951 <i>Mbo</i> I,+4769 <i>Alu</i> I	291-354	1										1
H2a1	-951 <i>Mbo</i> I,+4769 <i>Alu</i> I	297-354			1								1
H2a1	-951 <i>Mbo</i> I,+4769 <i>Alu</i> I	304-354										1	1
H2a1	-951 <i>Mbo</i> I,+4769 <i>Alu</i> I	354			1	1				2	3	4	11
H3	T6776C	92-243						1					1
H3	T6776C	176-311					1						1
H3	T6776C	192										1	1
H3	T6776C	249										1	1
H3	T6776C	298						1		1			2
H3	T6776C	298-354			1								1
H3	T6776C	301					1						1
H3	T6776C	311	2	2				1					5
H3	T6776C,G9380A	311				1							1
H3	T6776C	CRS				1	4	1				1	7
H4	T5003C	92							1				1
H4	T5003C	93								1			1
H4	T5003C	185								1			1
H4	+73 <i>Alw</i> 44I,T5003C	240	1										1
H4	+73 <i>Alw</i> 44I,T5003C	CRS	1										1
H4	T5003C	CRS				2			1	1			4
H5*	C456T	86-192-304					1						1
H5*	C456T	93-234-304						1					1
H5*	C456T	124-304				1							1
H5*	C456T	172-304							1				1
H5*	C456T	192-304								1			1
H5*	C456T	271-304						1					1
H5*	C456T	294-298-304										1	1
H5*	C456T	294-304				1							1

Hg ^b	Haplotype		Populations ^a										
	RFLP ^{c,d}	HVS-I data ^d	VUF	Fin	Est	Sik	Fre	Blk	Tur	NE	Asia	ESlav	Total
H5*	C456T	304		1	1	1	3		1			1	8
H5*	C456T	304-311				1							1
H5*	C456T	304-362						1					1
H5a	C456T,+4332 <i>Eco</i> 47I	166-304		1									1
H5a	C456T,+4332 <i>Eco</i> 47I	166-304-344		1									1
H5a	C456T,+4332 <i>Eco</i> 47I	188-192-266-304						1					1
H5a	C456T,+4332 <i>Eco</i> 47I	189-304						1					1
H5a	C456T,+4332 <i>Eco</i> 47I	304		1	1	1	1	3	1		1		9
H5a	C456T,+4332 <i>Eco</i> 47I	304-311							1			1	2
H6*	T239C,+16478 <i>Dde</i> I	362								1			1
H6a	T239C,G3915A,+16478 <i>Dde</i> I	362										1	1
H6a1	T239C,G3915A,-9380 <i>Hin</i> 6I, +16478 <i>Dde</i> I	92-245-362									5		5
H6a1	T239C,G3915A,-9380 <i>Hin</i> 6I, +16478 <i>Dde</i> I	111-362									1		1
H6a1	T239C,G3915A,-9380 <i>Hin</i> 6I, +16478 <i>Dde</i> I	189-243-342- 362									1		1
H6a1	+73 <i>Alw</i> 44I,T239C,G3915A, -9380 <i>Hin</i> 6I,+16478 <i>Dde</i> I	362									1		1
H6a1	T239C,G3915A,-9380 <i>Hin</i> 6I, +16478 <i>Dde</i> I	362		1	2	2	3	2		1			11
H6a1	T239C,G3915A,G9380A	209-362				1							1
H6a1	T239C,G3915A,G9380A	362		1				2	1				4
H6b	T239C	300-325-362								1			1
H6b	T239C,+16478 <i>Dde</i> I	167-300-325- 362									2		2
H6b	T239C,+16478 <i>Dde</i> I	300-362								1			1
H7	+4793 <i>Bsu</i> RI	93-265						1					1
H7	+4793 <i>Bsu</i> RI	126-261					1						1
H7	+4793 <i>Bsu</i> RI	189								1			1
H7	+4793 <i>Bsu</i> RI	261		1									1
H7	+4793 <i>Bsu</i> RI	261-325		1									1
H7	+4793 <i>Bsu</i> RI	265			1	1							2
H7	+4793 <i>Bsu</i> RI	304						1					1
H7	+4793 <i>Bsu</i> RI	311									1		1
H7	+4793 <i>Bsu</i> RI	327		1									1
H7	+4793 <i>Bsu</i> RI	CRS		1			3	1	1		2		8
H8	+13100 <i>Msp</i> I	129-288									3		3
H8	+13100 <i>Msp</i> I	93-288-362									1		1
H8	+13100 <i>Msp</i> I	288-362				1		1	3	1			6
H11a	-13757 <i>Aci</i> I,-8446 <i>Ssp</i> I	75-92-169-293- 311				1							1
H11a	-13757 <i>Aci</i> I,-8446 <i>Ssp</i> I	92-169-293-311									1		1
H11a	-13757 <i>Aci</i> I,-8446 <i>Ssp</i> I	92-293-301-311				1							1
H11a	-13757 <i>Aci</i> I,-8446 <i>Ssp</i> I	92-293-311						1					1
H11a	-13757 <i>Aci</i> I,-8446 <i>Ssp</i> I	209-278-293-								1			1

Hg ^b	Haplotype		Populations ^a										
	RFLP ^{c,d}	HVS-I data ^d	VUF	Fin	Est	Slk	Fre	Blk	Tur	NE	Asia	ESlav	Total
H11a	-13757 <i>Aci</i> I,-8446 <i>Ssp</i> I	311 224-278-293-311			1								1
H11a	-13757 <i>Aci</i> I,-8446 <i>Ssp</i> I	249-293-311				1							1
H11a	-13757 <i>Aci</i> I,-8446 <i>Ssp</i> I	278-293-311	3			1		1				1	6
H11a	-13757 <i>Aci</i> I,-8446 <i>Ssp</i> I	278-311	1										1
H11a	-13757 <i>Aci</i> I,-8446 <i>Ssp</i> I	293-311				1					1		2
H11a	-13757 <i>Aci</i> I,-8446 <i>Ssp</i> I	311				1							1
H11a	C456T,-13757 <i>Aci</i> I,-8446 <i>Ssp</i> I	311							1				1
H11a	-13757 <i>Aci</i> I,-8446 <i>Ssp</i> I	311-357										1	1
H*		51-93-312						1					1
H*		67									1		1
H*		69-93-111CA-222-278					1						1
H*		75-243-311								1			1
H*		83-221										1	1
H*		85-129										1	1
H*		92-176							1				1
H*		93				2					1	1	4
H*		93-129			1								1
H*		93-129-184								1			1
H*		93-129-221				1							1
H*		93-129-316		1	1								2
H*	+73 <i>Alw</i> 44I	93-162										1	1
H*		93-184-311					1						1
H*		93-228-291			1								1
H*		93-265AT	1										1
H*		93-272										1	1
H*		94-349									1		1
H*		111-209-218										1	1
H*		114-295	1										1
H*		126-189-295			1								1
H*		129						1			1		2
H*		129-184-221								1			1
H*		129-184-249										1	1
H*		129-239-316			1								1
H*		136									1		1
H*		142-311									1		1
H*		142-325						1					1
H*		145							1				1
H*		145-184-311								1			1
H*		148-256-319				1							1
H*		153-209-255							1				1
H*		168						1					1
H*	-8446 <i>Ssp</i> I,A8449G	168							1				1
H*		168-269						1					1

H _g ^b	Haplotype		Populations ^a										
	RFLP ^{c,d}	HVS-I data ^d	VUF	Fin	Est	Sik	Fre	Blk	Tur	NE	Asia	ESlav	Total
H*		168-309-325								1			1
H*		169							3				3
H*		171-189						1					1
H*		172									1		1
H*	+73Alw44I	172							1				1
H*		181-218								1			1
H*		184								1			1
H*		187-189-295								1			1
H*		188-189								1			1
H*		188-249							1				1
H*		189	1	1				2		1		1	6
H*		189-218-328CA							2				2
H*		189-240-295-354					1						1
H*		189-304				1							1
H*		189-311	1										1
H*		192-325						1					1
H*		209-261							3				3
H*	+73Alw44I	212					1						1
H*	+73Alw44I	212-299-362						1					1
H*		221			1								1
H*		222									1		1
H*		223							1		1		2
H*		234				1							1
H*		239						1					1
H*		243-265AC-311									1		1
H*		256-311-352							1				1
H*		256-352								1	1		2
H*		259-263							1				1
H*		261-311		1									1
H*		278				1			1				2
H*		278-311				1							1
H*		286-366							1				1
H*		287						2		1			3
H*		290-362									1		1
H*		291				2	1				1		4
H*		293			1						1		2
H*		293AC							1				1
H*		294-304						1			1		2
H*		299		2									2
H*		302							1				1
H*		304							1				1
H*		311	5	1		2	2	2	2	3	2	1	18
H*		319					1						1
H*		324				1				1			2
H*		325					1						1

H _g ^b	Haplotype		Populations ^a										
	RFLP ^{c,d}	HVS-I data ^d	VUF	Fin	Est	Slk	Fre	Blk	Tur	NE	Asia	Eslav	Total
H*		354	2										2
H*		362						1	1				2
H*		368					1						1
H*	+73 <i>Alw44</i> I	CRS	1	1	1								3
H*		CRS	9	2	8	5	7	6	7	7	4	4	59
H*	C456T	CRS				1							1
H*	C456T	70		1	1			1					3
Total number of individuals			50	31	50	50	50	50	50	50	48	50	479

^a Abbreviations for the populations are as follows: VUF – Finno-Ugric speakers of the Volga-Ural region, Fin – Finns, Est – Estonians, Slk – Slovaks, Fre – French, Blk – Balkan peoples, Tur – Turks, NE – Near Easterners, Asia – Asian peoples, Eslav – Eastern Slavs. 31 Finnish sequences are taken from Finnilä et al. (2001). The HVS-I sequences of the Finno-Ugric speakers of the Volga-Ural region have been published by Bermisheva et al. (2002). See details of the studied populations in the *Materials and Methods* section. ^b H_g – sub-haplogroup assignment of a haplotype. ^c RFLP sites are numbered from the first position of a recognition sequence. The following restriction sites were checked for all the samples: 73*Alw44*I, 951*Mbo*I, 3007*Bsh*1236I, 4332*Eco*47I, 4449*Mbo*I, 4769*Alu*I, 4793*Bsu*RI, 5003*Dde*I, 8446*Ssp*I, 9066*Eco*32I, 9380*Hin*6I, 13100*Msp*I, 13757*Aci*I and 16478*Dde*I. A “+” indicates the presence of a restriction site, a “-” the absence. Exact nucleotide has been shown only if it has been determined by sequencing or by allele-specific PCR. In front of the position number CRS nucleotide is shown. ^d HVS-I sequence data is for positions 16024-16383. Mutations are transitions unless further specified. Mutated nucleotide positions are relative to the Cambridge Reference Sequence (CRS) minus 16000.

Appendix S2. Haplotypes of 115 haplogroup H mtDNAs of Russian and Ukrainian origin.

		Haplotype														
Sample ^a	Hg ^b	HVS-I sequence data ^c	Coding region and HVS-II markers ^d										239	16478Ddel		
			3007Bsh1236I	5003Ddel	4793BsuRI	456	4332Eco47I	6776	9380Hin6I	13100MspI	8446SspI	13757AclI			4769AluI	951MboI
NN34	H1*	42-288	0	1		0		1	0	1	1			0		
OR52	H1*	42-288-290-311	0	1		0		1	0	1	1			0	T	
NN62	H1*	80-114-189-215	0			0								0		
NN45	H1*	93	0			0								0		
UKR15	H1*	93-325	0	1	0	0		1	0	1	1			1		
NN36	H1*	114-138	0			0								0		
I-11	H1*	174	0			0								0		
II-46	H1*	189	0			0								0		
OR79	H1*	249	0			0								0	T	
OR56	H1*	256	0			0								0	T	
OR35	H1*	261	0	1	0	0			0	1	1			0	T	
36	H1*	325	0	1	0	0		1	0	1	1			0		
22	H1*	CRS	0			0								0		
58	H1*	CRS	0			0								0		
I-6	H1*	CRS	0			0								0		
II-4	H1*	CRS	0			0								0		
II-55	H1*	CRS	0			0								0		
NN15	H1*	CRS	0			0								0		
NN3	H1*	CRS	0			0								0		
NN7	H1*	CRS	0			0								0		
NN70	H1*	CRS	0			0								0		
NN74	H1*	CRS	0			0								0		
NN75	H1*	CRS	0			0								0		
OR3	H1*	CRS	0			0								0	T	
OR51	H1*	CRS	0			0								0	T	
OR59	H1*	CRS	0			0								0	T	
OR70	H1*	CRS	0			0								0	T	
UKR106	H1*	CRS	0			0								0		
OR25	H1a	51-162-259	0			0								1	T	
NN54	H1a	162	0			0								1		
OR75	H1a	162-258AC	0			0								1	T	
NN13	H1b	80-189-248-270-356	0			0								0		
OR36	H1b	80-189-356	0			0								0	T	
64	H1b	189-356	0			0							0	0		
NN68	H1b	189-356	0			0								0		

Haplotype

		HVS-I sequence data ^c	Coding region and HVS-II markers ^d														
Sample ^a	Hg ^b		3007BshI236I	5003Ddel	4793BsuRI	456	4332Eco47I	6776	9380Hin6I	13100MspI	8446SspI	13757AclI	4769AluI	951MboI	73Afw44I	239	16478Ddel
I-17	H1b	189-356-362	0				0								0		
OR63	H1b	189-356-362	0				0								0	T	
OR30	H1b	189-318-356	0				0								0	T	
54	H2*	218	1				0						1	1	0		
OR6	H2*	270	1	0			0						1	1	0	T	
II-18	H2*	CRS	1				0						1	1	0		
NN32	H2*	CRS	1				0						1	1	0		
UKR103	H2a1	93-354	1				0						1	0	0		
NN60	H2a1	129-193-354	1				0						1	0	0		
II-16	H2a1	354	1				0						1	0	0		
NN53	H2a1	354	1				0						1	0	0		
NN67	H2a1	354	1				0						1	0	0		
II-6	H3	278-311	1	1	0	C	0	C	1	0	1	1	0		0		
NN76	H3	311	1	1	0	C	0	C	1		1	1	0		0		
II-28	H3	CRS	1	1	0	C	0	C	1	0	1	1	0		0		
NN11	H3	CRS	1	1	0	C	0	C	1		1	1	0		0		
NN50	H4	93-145	1	0	0		0		1	0	1	1	0		0		
OR58	H4	231 C/T	1	0	0		0		1	0	1	1	0		0	T	
67	H4	CRS	1	0	0		0		1	0	1	1	0		0		
I-14	H5*	304	1	0	T		0	T							0		
29	H5a	93-192-304-311	1	0			1								0		
OR17	H5a	213-304	1				1								0	T	
I-5	H5a	303-304	1				1								0		
OR54	H5a	304					1								0	T	
31	H5a	304-311	1				1								0		
NN33	H5a	304-311	1				1								0		
II-20	H6a1	362	1				0		0						0		1
NN35	H6a1	362	1				0		0						0		1
OR77	H6a1	362	1				0		0						0	C	1
I-10	H6a1	362	1				0		0						0		0
NN47	H6a1	362	1				0		0						0		0
NN66	H6a1	362	1				0		0						0		0
UKR83	H6a1	362	1				0		0						0		0
UKR88	H6a1	189-362	1				0		0						0		0
OR43	H6b	300-325-362	1	1		C	0	T	1						0	C	0
OR42	H7	265	1		1		0								0	T	
UKR93	H7	CRS	1		1		0						0		0		
OR28	H11a	92-140-189-265-293-311	1				0				0	0			0	T	

Haplotype

Sample ^a	Hg ^b	HVS-I sequence data ^c	Coding region and HVS-II markers ^d													
			3007Bsh1236I	5003Ddel	4793BsuRI	456	4332Eco47I	6776	9380Hin6I	13100MspI	8446SspI	13757AclI	4769AluI	951MboI	73Afw44I	239
II-35	H11a	209-234-278-311	1				0				0	0		0		
II-54	H11a	224-278-293-311	1				0				0	0		0		
OR13	H11a	278-293-311	1				0				0	0		0	T	
OR16	H11a	278-293-311	1				0				0	0		0	T	
OR8	H11a	278-293-311	1				0				0	0		0	T	
UKR41	H11a	278-293-311	1				0				0	0		0		
I-3	H11a	293-311	1				0				0	0		0		
74	H*	93	1	1	0	C	0	T	1	0	1	1	0	0		
OR29	H*	93	1	1	0		0		1	0	1	1	0	0	T	
UKR100	H*	129	1	1	0	C	0		1	0	1	1	0	0		
75	H*	168	1	1	0	C	0		1		1	1	0	0		
NN19	H*	192	1	1	0	C	0	T	1	0	1	1	0	0		
OR12	H*	274	1		0		0	T	1	0	1	1	0	0	T	
80	H*	278	1	1	0	C	0	T	1	0	1	1	0	0		
NN6	H*	278	1	1	0	C	0	T	1	0	1	1	0	0		
II-31	H*	291	1	1	0	C	0	T	1	0	1	1	0	0		
II-11	H*	295	1	1	0	C	0	T	1	0	1	1	0	0		
NN55	H*	311	1	1	0		0	T	1		1	1	0	0		
OR34	H*	311	1	1	0	C	0		1		1	1	0	0	T	
61	H*	147-169-189	1	1	0	C	0	T	1	0		1	0	0		
OR53	H*	148-256-319	1	1	0		0		1	0	1	1	0	0	T	
65	H*	189-274	1	1	0	C	0	T	1	0	1	1	0	0		
4	H*	189-311	1	1	0	C	0	T	1	0	1	1	0	0		
II-1	H*	256-352	1	1	0	C	0	T	1	0	1	1	0	0		
OR45	H*	256-352	1	1	0	C	0	T	1	0	1	1	0	0	T	
69	H*	278	1	1	0	C	0	T	1	0	1	1	0	0		
OR47	H*	93-129-189-316	1	1	0	C	0	T	1	0	1	1	0	0	T	
UKR85	H*	93-271	1	1	0	C	0	T	1	0	1	1	0	0		
76	H*	CRS	1	1	0	C	0	T	1	0	1	1	0	0		
I-4	H*	CRS	1	1	0	C	0	T	1	0	1	1	0	0		
II-13	H*	CRS	1	1	0		0	T	1	0	1	1	0	0		
II-17	H*	CRS	1	1	0	C	0	T	1	0	1	1	0	0		
II-39	H*	CRS	1	1	0	C	0	T	1	0	1	1	0	0		
NN1	H*	CRS	1	1	0	C	0	T	1	0	1	1	0	0		
NN12	H*	CRS	1	1	0	C	0	T	1	0	1	1	0	0		
NN48	H*	CRS	1	1	0	C	0	T	1	0	1	1	0	0		
NN65	H*	CRS	1	1	0	C	0	T	1	0	1	1	0	0		

		Haplotype															
		HVS-I sequence data ^c	Coding region and HVS-II markers ^d														
Sample ^a	Hg ^b		3007Bsh1236I	5003Ddel	4793BsuRI	456	4332Eco47I	6776	9380Hin6I	13100MspI	8446SspI	13757AclI	4769AluI	951MboI	73Alw44I	239	16478Ddel
OR22	H*	CRS	1	1	0		0	T	1	0	1	1	0		0	T	
OR55	H*	CRS	1	1	0		0		1		1	1	0		0	T	0
OR65	H*	CRS	1	1	0	C	0	T	1	0	1	1	0		0	T	
UKR107	H*	CRS	1	1	0	C	0	T	1	0	1	1	0		0		
UKR60	H*	CRS	1	1	0	C	0	T	1	0	1	1	0		0		

^a The HVS-I and HVS-II sequences of the Russians from the Orel region (designated in the table as OR) have been published by Malyarchuk et al. (2002), and the HVS-I sequences of Russians (plain numbers) and Ukrainians (UKR) from Magadan have been published by Malyarchuk and Derenko (2001). The Ukrainian samples from Magadan, UKR93, UKR100, UKR103, UKR106, UKR107, as well as the data on Russian samples from Nizhniy Novgorod (NN) and Belgorod (I or II) regions have not been published before. ^b Hg – haplogroup assignment of the sample. ^c Mutated nucleotide positions are relative to the Cambridge Reference Sequence (CRS) minus 16000. Nucleotide positions refer to transitions unless further specified. C/T denotes heteroplasmy. ^d “1” – restriction site intact, “0” –site absent. C and T refer to corresponding nucleotides.

Table S1. Coalescence ages of haplogroup H sub-clusters.

Clade, motif, (population), clock^a	N	<i>rho</i>^b	<i>sigma</i>^c	date^d	SD^e
H1-H11 hvs	364	1.38	0.26	27800	5300
H1-H11 coding	199	3.72	0.55	19100	2800
all H coding	265	3.39	0.42	17400	2100
H* coding	66	2.50	0.22	12800	1200
all H Asia hvs	48	1.71	0.42	34500	2200
all H Asia wo Altay hvs	31	1.26	0.27	25400	1400
all H Altay hvs	17	2.53	0.89	51000	4600
all H Near East hvs	50	1.36	0.26	27400	1400
H1 3010 coding	90	2.04	0.25	10500	1300
H1 3010 hvs	149	1.18	0.35	23800	7100
H1* 3010, H1 excl H1a, b, f hvs	96	0.66	0.15	13200	3000
H1a 00073-3010-16162 hvs	24	0.38	0.18	7600	3700
H1b 3010-16189-16356 hvs	19	0.68	0.26	13800	5300
H2 4769 coding	22	2.86	0.70	14700	3600
H2* 4769, H2 excl H2a hvs	12	0.58	0.25	11800	5000
H2a 4796-951 coding	6	1.17	0.44	6000	2300
H2a1 951-4769-16354 hvs	27	0.56	0.25	11200	5000
H2b 750-4769 coding	10	2.20	0.80	11300	4100
H3 6776 coding	31	2.16	0.32	11100	1600
H3 6776 hvs	25	0.80	0.40	16100	8000
H4 3992-4024-5004-9123-14365-14582 coding	10	3.80	1.19	19500	6100
H4 5004 hvs	12	0.58	0.25	11800	5000
H4a 3992-4024-5004-8269-9123-14365-14582 coding	8	3.13	0.93	16100	4800
H5* 456-16304 hvs	19	0.63	0.21	12700	4200
H5a 4336 coding	16	2.44	0.83	12500	4300
H5a 456-4336-16304 hvs	21	0.76	0.29	15400	5900
H5a1 4336-15833 coding	12	1.42	0.40	7300	2100
H6 239-16362 hvs	39	0.69	0.26	14000	5200
H6 Asia hvs	10	2.00	0.81	40400	16400
H6a 3915 coding	10	3.60	1.06	18500	5400
H6a1 3915-9380 coding	6	3.33	0.97	17100	5000
H6a1 239-3915-9380-16362-16482 hvs	32	0.50	0.23	10100	4700
H7 4793 coding	5	2.40	0.75	12300	3800
H7 4793 hvs	20	0.70	0.28	14100	5700
H8 13101AC-16288 hvs	10	0.70	0.44	14100	8800
H9 6869-9804 coding	4	0.75	0.43	3900	2200
H10 14470TA coding	4	2.25	0.75	11600	3900
H11a 8448-13759 coding	6	3.83	1.17	19700	6000
H11a 8448-13759-16311 hvs	27	2.11	0.87	42600	17500

^a Mutation motifs defining analyzed clusters are given as transitional differences from the root haplotype of haplogroup H, or a transversional change has been shown. Two molecular clocks – for the non-coding (“hvs”) and coding regions (“coding”) of mtDNA – have been used. ^b An average transitional distance from the root haplotype (*rho*) was calculated. ^c *Sigma* – Standard

deviation of ρ is as in Saillard et al. (2000).^d Coalescence time has been calculated taking one transitional step between nucleotide positions 16090 – 16365 (“hvs”) equal to 20180 years (Forster et al. 1996), and one base substitution between nucleotide positions 577 – 16023 (“coding”) equal to 5138 years (Mishmar et al. 2003).^e Standard deviation of the date estimate. Note that the 115 Eastern Slav samples analyzed hierarchically and not shown in Figure 3 have been included in the coalescence analysis. Note also that the coding sequence data is derived mainly from European populations.

Table S2. Frequencies of haplogroup H1b in various populations.

Region / Population ^a	Sample size	N(H) ^b	H1b ^c (%) ^d	H1b ^c (%) ^d	H1b ^c (%) ^d	H1b ^c (%) ^d	References ^f
Tunisians	563	151	-	-	-	-	this study
Arabs, Algeria	62	7	-	-	-	-	this study
Kabyles	65	19	-	-	-	-	this study
Libyans	101	18	-	-	-	-	this study
* Algerians	47	0	-	-	-	-	Plaza <i>et al.</i> , 2003
* Arabs, Morocco	336	76	-	-	-	-	Plaza <i>et al.</i> , 2003; this study
* Saharawi	56	0	-	-	-	-	Plaza <i>et al.</i> , 2003
Moroccan non-Berbers	32	11	-	-	-	-	Rando <i>et al.</i> , 1998
West-Saharan	25	5	-	-	-	-	Rando <i>et al.</i> , 1998
Mauritanians	30	5	-	-	-	-	Rando <i>et al.</i> , 1998
Wolof, Senegalese	48	0	-	-	-	-	Rando <i>et al.</i> , 1998
Serer, Senegalese	23	0	-	-	-	-	Rando <i>et al.</i> , 1998
Senegalese	50	2	-	-	-	-	Rando <i>et al.</i> , 1998
* Mozabites, Algeria, Ghardaia	85	20	-	-	-	-	Corte-Real <i>et al.</i> , 1996
* Berbers, Morocco	344	93	-	-	-	-	Pinto <i>et al.</i> , 1996; Rando <i>et al.</i> , 1998; Brakez <i>et al.</i> , 2001; Plaza <i>et al.</i> , 2003; this study
North West Africa	1867	407	-	-	-	-	
* Bedouins, Arabia	29	0	-	-	-	-	Di Rienzo and Wilson, 1991
* Egyptians	320	40	-	-	-	-	Krings <i>et al.</i> , 1999; Stevanovitch <i>et al.</i> , 2004; this study
* Nubians, southern Egypt, northern Sudan	82	12	-	-	-	-	Krings <i>et al.</i> , 1999
* Sudanese, southern Sudan tribes	79	6	-	-	-	-	Krings <i>et al.</i> , 1999
North East Africa	510	58	-	-	-	-	
* Turkey	606	157	1	0.2	0.6	0.6	Calafell <i>et al.</i> , 1996; Comas <i>et al.</i> , 1996; Richards <i>et al.</i> , 2000; this study
Kuwaitis	202	25	-	-	-	-	this study
Iranians	338	68	1	0.3	1.5	1.5	Richards <i>et al.</i> , 2000; this study
Saudis	205	25	-	-	-	-	this study
Kurds	53	11	-	-	-	-	Richards <i>et al.</i> , 2000
Lebanese	171	41	-	-	-	-	this study
Syrians	290	38	-	-	-	-	Richards <i>et al.</i> , 2000; this study
Iraqis	116	27	-	-	-	-	Richards <i>et al.</i> , 2000
* Jews, Yemen	43	1	-	-	-	-	Di Rienzo and Wilson, 1991; Richards <i>et al.</i> , 2000
Druze, Israel	45	6	-	-	-	-	Macaulay <i>et al.</i> , 1999
* Palestinians	117	35	-	-	-	-	Di Rienzo and Wilson, 1991; Richards <i>et al.</i> , 2000

Region / Population ^a	Sample size	N(H) ^b	Hib ^c (%) ^d	Hib (%) ^d	Hib (%) ^d	References ^f
Jordanians	212	40	-	-	-	this study
Near and Middle East	1792	317	1	0.1	0.3	
Caucasia	1572	377	1	0.1	0.3	Macaulay <i>et al.</i> , 1999; Richards <i>et al.</i> , 2000; this study
* Albanians	239	113	3	1.3	2.7	Belledi <i>et al.</i> , 2000; this study
Cretans	187	82	2	1.1	2.4	this study
Greeks	210	78	2	1.0	2.6	Richards <i>et al.</i> , 2000; this study
East Mediterranean	636	273	7	1.1	2.6	
* Sardinians	115	55	-	-	-	Di Rienzo and Wilson 1991; Richards <i>et al.</i> , 2000
* Corsicans	46	24	-	-	-	Varesi <i>et al.</i> , 2000
* Sicilians	643	230	2	0.3	0.9	Richards <i>et al.</i> , 2000; Cali <i>et al.</i> , 2001; this study
* Italians, central Italy	330	127	2	0.6	1.6	Francalacci <i>et al.</i> , 1996; Richards <i>et al.</i> , 2000; Tagliabracchi <i>et al.</i> , 2001; this study
Slovenes	186	83	-	-	-	Malyarchuk <i>et al.</i> , 2003; this study
Croatian islanders	444	171	1	0.2	0.6	Tolk <i>et al.</i> , 2001
Croats, southern Croatian mainland	146	64	1	0.7	1.6	this study
Croats, northern Croatian mainland	294	136	2	0.7	1.5	this study
Central Mediterranean	2204	890	8	0.4	0.9	
* Portuguese	295	128	4	1.4	3.1	Corte-Real <i>et al.</i> , 1996; Pereira <i>et al.</i> , 2000
* Spaniards	493	217	4	0.8	1.8	Corte-Real <i>et al.</i> , 1996; Crespillo <i>et al.</i> , 2000; Larruga <i>et al.</i> , 2001; Maca-Meyer <i>et al.</i> , 2003
* Basques	106	72	-	-	-	Bertranpetit <i>et al.</i> , 1995; Corte-Real <i>et al.</i> , 1996
Galicians	92	55	-	-	-	Salas <i>et al.</i> , 1998
Lebanegos	72	38	1	1.4	2.6	Maca-Meyer <i>et al.</i> , 2003
Pasiegos	82	22	-	-	-	Maca-Meyer <i>et al.</i> , 2003
Iberia	1140	532	9	0.8	1.7	
* English	334	164	7	2.1	4.3	Piercy <i>et al.</i> , 1993; Richards <i>et al.</i> , 1996; Richards <i>et al.</i> , 2000; Helgason <i>et al.</i> , 2001
Scottish	891	402	6	0.7	1.5	Helgason <i>et al.</i> , 2001
Irish, western Ireland	101	44	2	2.0	4.5	Richards <i>et al.</i> , 2000
Welsh	92	53	-	-	-	Richards <i>et al.</i> , 1996; Richards <i>et al.</i> , 2000
Scottish, Western Isles and Skye	230	72	2	0.9	2.8	Helgason <i>et al.</i> , 2001
* French	1130	540	1	0.1	0.2	Rousselet and Mangin, 1998; Danan <i>et al.</i> , 1999; Richards <i>et al.</i> , 2000; Cali <i>et al.</i> , 2001; this study
West	2778	1275	18	0.6	1.4	
* Danish	33	19	-	-	-	Richards <i>et al.</i> , 1996
* Norwegians	641	302	5	0.8	1.7	Dupuy and Olaisen 1996; Opdal <i>et al.</i> , 1998; Helgason <i>et al.</i> , 2001; Passarino <i>et al.</i> , 2002
* Swedes	503	216	7	1.4	3.2	Sajantila <i>et al.</i> , 1996; this study

Region / Population ^a	Sample size	N(H) ^b	H1b ^c	H1b (%) ^d	H1b (%) ^e	H1b (%) ^e	References ^f
Scandinavia	1177	537	12	1.0	2.2		
* Germans	1233	574	18	1.5	3.1		Richards et al., 1996; Hofmann et al., 1997; Baasner et al., 1998; Lutz et al., 1998; Pfeiffer et al., 1999
* Poles	583	262	22	3.8	8.4		Richards et al., 2000; Malyarchuk et al., 2002; this study
Czechs	177	73	3	1.7	4.1		Richards et al., 2000; this study
Slovaks	129	55	-	-	-		this study
North Central	2122	964	43	2.0	4.5		
* Germans, southern Germany, Bavaria	49	18	-	-	-		Richards et al., 1996
* Swiss	434	189	3	0.7	1.6		Pult et al., 1994; Dimo-Simonin et al., 2000; this study
Italians, North-East Italy	67	28	1	1.5	3.6		Mogentale-Profizi et al., 2001
* Austrians	117	56	4	3.4	7.1		Handt et al., 1994; Parson et al., 1998
Alpine	667	291	8	1.2	2.7		
Bosnians	395	182	6	1.5	3.3		Malyarchuk et al., 2003; this study
Herzegovinians	141	53	-	-	-		this study
Serbs	121	44	2	1.7	4.5		this study
Macedonians	144	61	-	-	-		this study
* Bulgarians	141	57	1	0.7	1.8		Calafell et al., 1996; Richards et al., 2000
Romanians	446	186	3	0.7	1.6		Richards et al., 2000; this study
Hungarians	116	47	3	2.6	6.4		this study
South East	1504	630	15	1.0	2.4		
Ukrainians	646	260	18	2.8	6.9		Malyarchuk and Derenko, 2001; this study
* Russians	583	219	16	2.7	7.3		Richards et al., 2000; this study
East South	1229	479	34	2.8	7.1		
Russians, North-Russia	380	174	6	1.6	3.4		Orekhov et al., 1999; this study
Byelorussians, Vitebsk	89	34	2	2.2	5.9		this study
Latvians	299	132	19	6.4	14.4		this study
Lithuanians	45	24	2	4.4	8.3		this study
* Estonians	545	251	24	4.4	9.6		Sajantila et al., 1995; this study
* Finns	581	236	3	0.7	1.3		Pult et al., 1994; Sajantila et al., 1995; Lahermo et al., 1999; Kittles et al., 1996; Kittles et al., 1999; Meimilä et al., 2001
* Karelians	83	34	-	-	-		Sajantila et al., 1995
East North	2022	885	56	2.8	6.3		
* Saami	445	18	-	-	-		Sajantila et al., 1995; Dupui and Olaisen 1996; Delghandi et al., 1998; Tambets et al., 2004
Bashkirs	209	30	2	1.0	6.7		Bermisheva et al., 2002
Tatars	176	55	1	0.6	1.8		Bermisheva et al., 2002; this study

Region / Population ^a	Sample size	N(H) ^b	H1b ^c (%) ^d	H1b (%) ^d	H1b (%) ^d	References ^f
Chuvashes	89	26	-	-	-	Richards <i>et al.</i> , 2000; Bermisheva <i>et al.</i> , 2002
* Maris	147	57	-	-	-	Sajantila <i>et al.</i> , 1995; Bermisheva <i>et al.</i> , 2002; this study
* Mordvin	111	47	2	1.8	4.3	Sajantila <i>et al.</i> , 1995; Bermisheva <i>et al.</i> , 2002
Komis	340	109	1	0.3	0.9	Bermisheva <i>et al.</i> , 2002; this study
Volga-Uralic	1072	324	6	0.6	1.9	
Kalmyks	120	1	-	-	-	this study
Uzbeks	161	24	-	-	-	this study
Arabs, Uzbekistan	77	18	1	1.3	5.6	this study
* Kazakhs	191	23	-	-	-	Comas <i>et al.</i> , 1998; Yao <i>et al.</i> , 2000; this study
* Kirghiz	197	25	-	-	-	Comas <i>et al.</i> , 1998; this study
Tajiks	78	15	-	-	-	this study
Oroks	60	0	-	-	-	this study
* Uighurs	167	28	-	-	-	Comas <i>et al.</i> , 1998; Yao <i>et al.</i> , 2000; this study
Tuvinians	202	23	-	-	-	this study
Altaians	449	44	-	-	-	Derenko <i>et al.</i> , 2002; this study
Central Asia	1702	201	1	0.1	0.5	
Khants	255	46	3	1.2	6.5	this study
Mansis	98	14	5	5.1	35.7	Derbeneva <i>et al.</i> , 2002
Nenets	79	13	-	-	-	this study
Selkups	120	34	-	-	-	this study
Kets	104	13	-	-	-	Derbeneva <i>et al.</i> , 2002; this study
Yakuts	274	7	-	-	-	Fedorova <i>et al.</i> , 2003; Puzyrev <i>et al.</i> , 2003
Dolgans	130	1	-	-	-	this study
Siberia	1060	128	8	0.8	6.3	

^a Populations are divided into geographical regions according to the model used by Richards *et al.* (2000, 2002) with modifications. Note that the Eastern European populations have been further divided into northern and southern regions. Note also that the British and French samples have been grouped into the “Western” region. The Basques are included in the “Iberian” region together with other West Mediterranean populations. ^b Number of haplogroup H samples, * includes data deduced from published sources. ^c Absolute frequency of H1b in studied populations. ^d Percentage of H1b. ^e Percentage of H1b relative to haplogroup H. Note that the following samples analyzed here overlap those analyzed by Tambets *et al.* (2004): 73 Saamis, 471 Swedes, 497 Estonians, 299 Latvians, 45 Lithuanians, 134 Russians from North, 624 Ukrainians, 111 Poles, 134 Maris, 208 Komis, 2 Tatars, 1144 Caucasians, 150 Italians from central Italy, 187 Cretans, 85 Greeks, 440 Croats, 199 Albanians,

- 251 Slovenes, 82 Slovenes, 304 French, 116 Hungarians, 94 Czechs, 129 Slovaks, 255 Khants, 79 Nenets, 120 Selkups, 66 Kets, 130 Dolgans, 339 Altaians.
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Figure S1. Parsimonious phylogenetic tree of mtDNA haplogroup H coding region sequences, including nucleotide positions 577 – 16023. Mutations are transitions unless a transversional base change has been shown. Recurrent mutations are underlined. Possible sequencing mistakes are shown in italics. “9-bp-del” – nine base pair deletion between positions 8272 and 8289. “12311iA” – insertion of A between CRS positions 12311 and 12312. Sequence data is from the following sources: one sequence from Reid et al. (1994. *Hum Mol Genet* 3:1435-1436) (Reid); 7 from Rieder et al. (1998. *Nucleic Acids Res* 26:967-973) (Rie); 2 from Levin et al. (1999. *Genomics* 55:135-146) (Lev); 3 from Ingman et al. (2000. *Nature* 408:708-713) (Ing); 29 from Finnilä et al. (2001. *Am J Hum Genet* 68:1475-1484) (F), mtDNAs number 8 and 9 were excluded because of excessive amount of phylogenetic conflicts in their sequence data; 2 from Maca-Meyer et al. (2001. *BMC Genet* 2:13; GenBank AF381993, AF382002) (MM); 214 from Herrnstadt et al. (2002. *Am J Hum Genet* 70:1152-1171), corrected by the authors (2003. *Am J Hum Genet* 72:1585-1586) (plain numbers) and 7 from Mishmar et al. (2003. *Proc Natl Acad Sci U S A* 100:171-176) (E).