

**Table S1. Frequencies of haplogroups R1a\*-M420, R1a1\*-SRY10831.2 and R1a1a\*-M17/M198**

Population or country/territory	N	R1a*	R1a1*	R1a1a*	Reference
<b>Europe</b>					
Friesland	94	nd	0	7	1
England	310	nd	0	1	1
Greece	132	nd	0	8	1
Crete	168	0	0	18	2
Crete	193	0	0	17	updated from 3
Finland east	306	nd	0	18	4
Finland west	230	nd	0	20	4
Belgium	54	nd	0	2	5
Denmark	107	nd	0	19	5
Norway	51	nd	1	9	5
Galicia	100	0	0	1	5
Austria	129	nd	0	18	5
Germany	95	nd	0	6	5
Swedes, Sweden	305	nd	3	36	6
Sweden	160	0	0	39	7
Saami, Sweden	38	0	0	6	6
Estonia	118	0	0	44	7
Estonia	100	0	0	35	This study
Latvia	113	0	0	44	7
Lithuania	164	0	0	56	7
Karelians, Russia	132	0	0	33	7
Romania	335	0	0	57	This study
Croatia Krk Island	74	0	0	27	This study
Croatia Brac Island	49	0	0	12	This study
Croatia Hvar Island	91	0	0	6	This study
Croatia Korcula Island	134	0	0	21	This study
Croatia mainland	108	0	0	29	This study
Herzegovina	141	0	0	17	This study
Albanians, Kosovo	114	0	0	4	This study
Serbia	113	0	0	21	This study
FYROM, Macedonia	79	0	0	11	This study
Greeks, Macedonia	57	0	1	6	8
Czech Republic	53	0	0	20	This study
Belorussia	50	0	0	21	This study
Russians, Russia	39	0	0	15	This study
<b>Middle East, Central, South Asia</b>					
Tajiks, Turkmens	38	0	0	3	This study
Azer	29	nd	0	3	1
Tuvas, Russia	104	0	0	8	This study
Altaians, Russia	58	0	0	24	This study
Mongolia	402	nd	0	10	1
Pakistan	176	nd	0	43	9
India	728	0	0	115	9
India Jammu (Brahmin)	61	0	0	23	This study
India Andhra-Pradesh (Brahmin)	19	0	0	5	This study
India Madhya-Pradesh (Brahmin)	54	0	0	19	This study
India Uttar-Pradesh (Brahmin)	171	0	0	85	This study
India Uttranchal (Brahmin)	21	0	0	10	This study
India West-Bengal (Brahmin)	49	0	0	24	This study
India Asur Jharkhand	88	0	0	5	This study
India Ho Jharkhand	45	0	0	0	This study
India Mawasi Jharkhand	27	0	0	1	This study
India Mawasi Madhya-Pradesh	12	0	0	1	This study
India Mahali Jharkhand	32	0	0	3	This study
India Santhal Jharkhand	20	0	0	2	This study
India Birhor Chattishgarh	27	0	0	1	This study
India Birhor Maharashtra	35	0	0	1	This study
India Baiga Madhya-Pradesh	23	0	0	2	This study
India Baiga Orissa	42	0	0	1	This study
India Kharia Chattishgarh	37	0	0	2	This study

India Savara Orissa	21	0	0	2	This study
India Garo Meghalaya	25	0	0	1	This study
India Khasi Meghalaya	21	0	0	1	This study
Oman	121	1	0	11	updated from 10
Iran	87	0	0	9	This study
Iran	150	2	1	19	updated from 11
Qatar	72	0	0	5	12
United Arab Emirates	164	1	0	12	updated from 12
Lebanon	914	0	0	23	13
Syria	44	nd	0	1	1
Turkey	173	nd	0	18	1
Turkey	89	2	0	3	This study
Turkey	523	1	0	36	updated from 14
<b>Caucasus</b>					
Georgia	68	nd	0	3	1
Armenians, Armenia and Diaspora	734	nd	2	37	1
Armenia	25	0	0	1	This study
Megrels	67	0	0	6	This study
Abkhazes	162	0	0	15	This study
Osetins South	23	0	0	1	This study
Osetins North	134	0	0	1	This study
Avars	42	0	0	1	This study
Chamalals	27	0	0	2	This study
Bagvalals	28	0	0	1	This study
Andis	49	0	0	1	This study
Lezgis	31	0	0	0	This study
Darginians	68	0	0	0	This study
Tabasarans	43	0	0	1	This study
Adyghes	160	0	0	18	This study
Karachays	69	0	0	19	This study
Kumyks	76	0	0	10	This study
Balkars	136	0	0	35	This study
Cherkessians	126	0	0	16	This study
Kabardians	141	0	1	19	This study
Abazas	89	0	0	17	This study
Nogays	87	0	0	11	This study
Karanogays	77	0	0	7	This study
Tats	10	0	0	0	This study

**Table S2. Frequencies of haplogroup R1a1a\* and R1a1a7\***

Population/Region	N	Frequency %			Reference
		R1a1a total	R1a1a*(xM458)	R1a1a7*	
<b>Western Europe</b>					
Norway	74	23.0	23.0	0	This study
Sweden South (Malmö)	141	18.4	16.3	2.1	This study
Denmark East	17	5.9	5.9	0	This study
Denmark Island (East)	10	10.0	10.0	0	This study
Denmark North	43	11.6	11.6	0	This study
Denmark West	19	15.8	15.8	0	This study
Denmark Southeast	23	13.0	8.7	4.3	This study
Netherlands West	47	4.3	0	4.3	This study
Netherlands North	22	9.1	9.1	0	This study
Netherlands Southeast	19	5.3	5.3	0	This study
Ireland East	16	6.3	6.3	0	This study
Ireland North	21	9.5	9.5	0	This study
Ireland South	24	0	0	0	This study
Ireland Southwest	22	0	0	0	This study
Ireland West	16	0	0	0	This study
England Central	25	0	0	0	This study
England North	29	3.4	3.4	0	This study
England Southeast	25	0	0	0	This study
England Southwest	25	0	0	0	This study
France East	25	4.0	4.0	0	This study
France	16	0	0	0	This study
France West	14	0	0	0	This study
France, HGDP-CEPH	12	0	0	0	This study
Spain, Andalusia	29	0	0	0	15
Germany	16	6.3	6.3	0	This study
Germany West	100	5.0	5.0	0	This study
Germany East	47	29.8	19.1	10.6	This study
Germany South	91	11.0	4.4	6.6	This study
Germany Central	19	15.8	5.3	10.5	This study
Germany North	65	15.4	12.3	3.1	This study
Austria	19	26.3	21.1	5.3	This study
Switzerland Northeast	32	6.3	6.3	0.0	This study
Switzerland Northwest	27	3.7	3.7	0.0	This study
Switzerland South	16	0	0	0	This study
Switzerland	16	0	0	0	This study
<b>Central, Eastern and Northern Europe</b>					
Poland (Zamosc)	98	57.1	20.4	36.7	Updated from 8
Poland Southwest (Wroclaw)	93	55.9	32.3	23.7	This study
Poland Central	42	47.6	14.3	33.3	This study
Poland South	22	50.0	13.6	36.4	This study
Poland North	17	52.9	29.4	23.5	This study
Poland West	15	26.7	20.0	6.7	This study
Poland East	13	46.2	30.8	15.4	This study
Ukraine Central-eastern (Dneprovskii)	114	43.9	21.1	22.8	This study
Ukraine West (Lvov, Ivanovo-Frankovsk)	157	43.3	27.4	15.9	This study
Ukraine Western-central (Hmel'nitsk)	179	49.2	41.3	7.8	This study
Ukraine Southeast (Donetsk)	93	34.4	23.7	10.8	Updated from 8
Ukraine East (Belgorod)	56	46.4	41.1	5.4	This study
Ukraine Central	28	17.9	10.7	7.1	This study
Belorussia Central	50	42.0	38.0	4.0	This study
Belorussia West (Brest)	97	58.8	36.1	22.7	This study
Belorussia Northeast (Vitebsk)	100	60.0	47.0	13.0	This study
Czech Republic (2 locations)	88	34.1	8.0	26.1	This study
Slovakia (Bratislava)	82	45.1	18.3	26.8	This study
Slovakia West	109	44.0	25.7	18.3	This study

Slovakia East	38	52.6	34.2	18.4	This study
Slovakia South	23	60.9	39.1	21.7	This study
Slovakia North	22	45.5	31.8	13.6	This study
Hungary	113	20.4	15.9	4.4	Updated from 16
Slovenia (2 locations)	180	30.0	27.2	2.8	This study
Russians Russia South (Belgorod)	143	62.2	50.3	11.9	Updated from 17
Russians Russia Central (Kostroma)	52	30.8	19.2	11.5	Updated from 17
Russians Russia Central (Pskov)	132	47.0	34.8	12.1	Updated from 17
Russians Russia South (Orel)	110	61.8	47.3	14.5	Updated from 17
Russians Russia Southwest	22	27.3	13.6	13.6	This study
Russians Russia Northwest	14	42.9	28.6	14.3	This study
Estonia	210	34.3	28.6	5.7	This study
Karelians (Russia)	140	40.7	27.1	13.6	This study
Vepsa (Russia)	39	38.5	23.1	15.4	This study
<b>Circum-Uralic region</b>					
Chuvashis (Russia)	117	25.6	25.6	0	This study
Bashkirs (Russia)	126	28.6	28.6	0	This study
Maris (Russia)	49	26.5	26.5	0	This study
Komis-permyans (Russia)	60	36.7	36.7	0	This study
Komis (Russia)	52	5.8	1.9	3.8	This study
Tatars from Bashkortostan (Russia)	39	15.4	12.8	2.6	This study
Tatars from Tatarstan (Russia)	66	39.4	34.8	4.5	This study
Udmurts (Russia)	141	18.4	16.3	2.1	This study
<b>South-eastern Europe</b>					
Croatia mainland	108	26.9	24.1	2.8	Updated from 17
Croats Osijek (Croatia)	29	37.9	37.9	0	Updated from 8
Croats Split (Croatia)	89	25.8	16.9	9.0	Updated from 8
Croatia Krk Island	74	36.5	24.3	12.2	Updated from 17
Croatia Korcula Island	134	15.7	12.7	3.0	Updated from 17
Croatia Brac Island	49	24.5	22.4	2.0	Updated from 17
Croatia Hvar Island	91	6.6	6.6	0	Updated from 17
Croats, Bosnia	90	12.2	7.8	4.4	Updated from 8
Bosnia (2 locations)	163	23.3	12.9	8.6	Updated from 8
Serbs, Bosnia	83	13.3	8.4	4.8	Updated from 8
Serbia	113	15.9	12.4	3.5	Updated from 18
Albanians, Kosovo	114	3.5	3.5	0	Updated from 18
Montenegro	103	6.8	6.8	0	This study
Herzegovina	141	12.1	11.3	0.7	Updated from 18
FYROM, Macedonia	79	13.9	10.1	3.8	Updated from 18
Albania	55	10.9	5.5	5.5	Updated from 8
Greece (2 locations)	263	12.9	9.1	4.2	Updated from 8
Greeks, Macedonia	57	12.8	1.8	8.8	Updated from 8
Crete	193	8.8	7.8	1.0	Updated from 3
Crete	168	10.7	7.1	3.6	Updated from 2
Romania	335	17.0	11.6	5.4	This study
Italy South (2 locations)	163	1.8	1.8	0	This study
Italy North	124	6.5	6.5	0	This study
Italy Northeast	64	7.8	7.8	0	Updated from 8
<b>Caucasus Northern</b>					
Osetins North	134	0.7	0.7	0	This study
Karachays	69	27.5	27.5	0	This study
Avars	42	2.4	2.4	0	This study
Chamalals	27	7.4	7.4	0	This study
Bagvalals	28	3.6	3.6	0	This study
Andis	49	2.0	2.0	0	This study
Lezgis	31	0	0	0	This study
Darginians	68	0	0	0	This study
Tabasarans	43	2.3	2.3	0	This study
Karanogays	77	9.1	1.3	7.8	This study

Abazas	89	19.1	15.7	3.4	This study
Adygghes	160	11.3	9.4	1.9	This study
Balkars	136	25.7	23.5	2.2	This study
Cherkessians	126	12.7	10.3	2.4	This study
Kabardinians	141	14.2	13.5	0.7	This study
Nogays	87	12.6	11.5	1.1	This study
Kumyks	76	13.2	11.8	1.3	This study
<b>Caucasus Southern</b>					
Osetins South	23	4.3	4.3	0	This study
Armenians	25	4.0	4.0	0	This study
Abkhazes	162	9.3	8.6	0.6	This study
Megrels	67	9.0	7.5	1.5	This study
Georgians Tbilisi (Georgia)	65	10.8	9.2	1.5	Updated from 8
<b>Near, Middle East, India</b>					
Turkey West	163	6.1	5.5	0.6	Updated from 14
Turkey Central	152	3.3	2.6	0.7	Updated from 14
Turkey East	208	8.7	8.2	0.5	Updated from 14
Egypt	147	2.7	2.7	0	This study
Oman	121	9.1	9.1	0	This study
Jordan	76	5.3	5.3	0	This study
Palestine	49	0	0	0	This study
Yemen	62	0	0	0	12
Iran	150	14.0	14.0	0	Updated from 11
Iran	87	10.3	10.3	0	This study
Pakistan North	85	16.5	16.5	0	Updated from 9
Pakistan South	91	24.2	24.2	0	Updated from 9
India, Central Uttar Pradesh Brahmins, Caste	68	39.7	39.7	0	This study
India, Maharashtra, Tribe	210	14.3	14.3	0	This study
<b>Central Asia, South Siberia</b>					
Turkmens, Tajiks	38	7.9	7.9	0	This study
Uzbekistan	54	13.0	13.0	0	This study
Kazahs, Kazakstan	133	1.5	1.5	0	This study
Kurds (sampled in Kazakstan)	23	30.4	30.4	0	This study
Altaians (Russia)	61	39.3	39.3	0	This study
Tuvas (Russia)	103	7.8	7.8	0	This study
Khakassians (Russia)	76	34.2	32.9	1.3	This study
Kyrgyzstan	154	50.0	50.0	0	This study

**Table S3. Frequencies of Y chromosome haplogroups R1a1a-M17 and R1a1a6-M434.**

Population or country/territory	N	R1a1a-M17 frequency	R1a1a6-M434 frequency	Reference		
<b>Pakistan</b>						
Baloch	60	9	15%	5	8%	This study
Balti	13	6	46%	0		This study
Brahui	111	39	35%	0		This study
Burusho	96	24	25%	0		This study
Hazara	29	0		0		This study
Kalash	44	8	18%	0		This study
Kashmiri	10	5	50%	0		This study
Makrani	60	15	25%	4	7%	This study
Mohanna	70	50	71%	0		This study
Parsi	90	7	8%	0		This study
Pathan	96	43	45%	0		This study
Rajput	10	6	60%	0		This study
Sindhi	134	65	49%	2	1%	This study
Syed	31	4	13%	0		This study
<b>India</b>						
<b><i>Punjab/Haryana</i></b>						
Ahir	24	15	63%	0		This study
Balmiki	24	8	33%	0		This study
Khatri	15	10	67%	0		This study
<b><i>Gujarat</i></b>						
Brahmins	16	3	19%	0		This study
Scheduled Castes	9	3	33%	0		This study
Rabari	34	11	32%	0		This study
Vasava	50	5	10%	0		This study
Tadvi	50	7	14%	0		This study
Bhil	50	8	16%	0		This study
Dungari Bhil	50	13	26%	0		This study
Kathodi	15	6	40%	0		This study
Dungari Grassia	51	15	29%	0		This study
Rathawa	49	3	6%	0		This study
Koli	24	5	21%	0		This study
Bhanusali	6	4	67%	0		This study
Lohana	20	12	60%	0		This study
<b><i>Rajasthan</i></b>						
Meena	80	23	29%	0		This study
Meena	56	21	38%	0		This study
Meghwal	50	15	30%	0		This study
Bhill	50	9	18%	0		This study
<b><i>Other states of India</i></b>						
Birhor	15	1	7%	0		This study
Chakma	20	0		0		This study
Darlong	24	0		0		This study
Gadaba	27	0		0		This study
Kuruman	21	1	5%	0		This study
Meo	16	5	31%	0		This study
Malayali	18	2	11%	0		This study

Manipuri	6	3	50%	0	This study
Nicobarese	17	0		0	This study
Patel	12	1	8%	0	This study
Riang	22	0		0	This study
Sholiga	16	0		0	This study
Tharu	16	0		0	This study
Tharu-Rana	16	3	19%	0	This study
Urali	11	0		0	This study

### Europe & MidEast

Greece	171	19		0	Updated from 3
Egypt	147	4		0	Updated from 10
Oman	121	11		3	2.5% Updated from 10
Turkey	523	36		0	Updated from 14
Iran	150	19		0	Updated from 11
Tibet	156	3		0	Updated from 19
Nepal	188	46		0	Updated from 19
Crete	361	34	9.4	0	Updated from 2;3
Assyrians	88	1		0	This study
Bedouin (HGDP-CEPH)	28	2		0	This study
Uyгур,China (HGDP-CEPH)	8	2			This study
Tu, China (HGDP-CEPH)	7	1			This study
Tajekistan	24	3		0	This study
UAE	164	12	6.9	0	Updated from 12
Qatar	72	5	7.3	0	Updated from 12

**Table S4. Coalescent times and median haplotypes of haplogroup R1a1a\* and R1a1a7\* by populations.**

	R1a1a*			M458A median haplotypes by population										R1a1a7*			M458G median haplotypes by population									
	N	T <sub>D</sub>	SE	D19	D388	D389I	D389II	D390	D391	D392	D393	D439	A7.2	N	T <sub>D</sub>	SE	D19	D388	D389I	D389II	D390	D391	D392	D393	D439	A7.2
Karelia	n.d.													12	3	1.8	16	12	13	16	25	10	11	13	11	10
Vepsa	n.d.													6	2.4	1	16	12	13	16	25	10	11	13	11	10
Estonia	14	8	1.9	16	12	13	17	25	11	11	13	10	10	11	6.3	3.5	15	12	13	16	25	10	11	13	11	10
Ukraine	18	7.4	2.1	16	12	13	17	25	11	11	13	10	10	7	4.7	1.8	16	12	13	16	25	10	11	13	11	10
Russia	10	8.7	3.4	16	12	13	17	25	11	11	13	10	10	12	8	2.9	16	12	13	16	24	10	11	13	11	10
Hungary	15	9.2	2.5	16	12	13	17	25	11	11	13	10	10	5	6.5	2.8	17	12	13	17	25	10	11	13	11	10
Germany	28	9.9	2.8	16	12	13	17	25	11	11	13	10	10	15	7.5	2.3	16	12	13	16	25	10	11	13	11	10
Denmark	12	9.7	2.8	15	12	13	17	25	11	11	13	10	10	1												
Czech Rep.	3													7	5.7	2.1	16	12	13	17	25	10	11	13	11	10
Slovakia	70	11.2	2.7	16	12	13	17	25	11	11	13	10	10	56	8.3	2.6	16	12	13	17	25	10	11	13	11	10
Poland	19	11.3	3.7	16	12	13	17	25	11	11	13	10	10	27	10.7	4.1	17	12	13	17	25	10	11	13	10	10
Slovenia	33	6.9	1.6	16	12	13	17	25	10	11	13	10	10	3												
Greece	13	7.8	2.4	16	12	13	17	25	11	11	13	10	10	6	0.6	0.6	16	12	13	16	25	10	11	13	11	10
Italy	8	5.9	1.8	16	12	13	18	25	10	11	13	10	10	0												
Croatia	n.d.													18	5.3	1.9	16	12	13	16	25	10	11	13	11	10
Crete	12	11.2	3.1	16	12	13	17	25	11	11	13	10	10	7	6.6	2.5	16	12	13	16	25	10	11	13	11	10
Turkey	34	9.3	2.4	16	12	13	17	25	11	11	13	10	10	3	3.6	1.8	16	12	13	16	25	10	11	13	11	10
Nepal <sup>1</sup>	48	14.2	4.3	16	12	13	18	25	11	11	13	10	10	0												
Altay, Tuva	17	8.1	2.6	16	12	14	17	26	11	11	13	11	10	0												
Caucasus	11	12.2	3.4	15	12	13	17	25	11	11	13	10	10	23	7.9	2.2	16	12	13	16	25	10	11	13	11	10
Oman	11	12.5	2.9	16	12	13	17	25	11	11	13	10	10	0												
UAE	12	9.7	4.2	16	12	13	17	25	11	11	13	10	10	0												
Iran	25	9.4	2.9	16	12	13	17	25	11	11	13	10	10	0												
Pakistan	43	15.0	3.0	16	12	13	17	25	11	11	13	10	10	0												
Kyrgyzstan	66	5.6	1.8	16	12	14	18	25	11	11	13	10	10	0												
India sum <sup>2</sup>	113	14.0	3.1	15	12	13	17	25	10	11	13	10	10													
India East <sup>2</sup>	19	11.8	3.1	16	12	14	17	25	11	11	13	10	10													
India North <sup>2</sup>	32	12.4	3.4	15	12	13	18	25	11	11	13	10	10													
India South <sup>2</sup>	39	12.3	3.1	15	12	13	17	25	10	11	13	10	10													
India West <sup>2</sup>	17	15.8	4.7	15	12	13	18	25	10	11	13	10	10													
Other populations	25													5												
Total	660	12.7	2.6	16	12	13	17	25	11	11	13	10	10	224	7.9	2.6	16	12	13	16	25	10	11	13	11	10

T<sub>D</sub> time estimates (in ky) calculated for N>5, according to the method described in Zhivotovsky et al. 2004(20) assuming mutation rate (6.9 x 10<sup>-4</sup> per 25 years) assuming a founder at the median haplotype estimated for each individual population (9).

1 - Data from 19

2 - Data from 9



Table S5: Description of R1a associated SNPs

Marker	reference nosequence number	hg	nucleoti de change	amplico n size (bp)	SNP position from 5' end	Primer forward 5'-3'	Primer reverse 5'-3'	reference
M417	rs17316771	R1a1a*	G to A	283	153	TGCAGAAAGAAGAGGAGGACAGCC	CATGTGTAGTTGGGGGACCACATCC	21
M420	rs17250535	R1a*	T to A	275	26	GGCAAACTTTTTCATTGCTGG	CTAAAAAACTTAACCCATCACAC	21
M448	rs17222202	R1a1*	T to A	317	107	GTGAGAAAGAGAAATGCCAGG	GACATACATCCTCTGTTCCC	21
M449	rs17306692	R1a*	C to A	317	138	TCAACCAACAATTTGCAACCC	TCTGTGAGCAAGGTGACAGC	21
M459	rs17316227	R1a1*	A to G	316	149	TGAAGATGCAAACCAGCACG	CAATAGTCTCACAAGAGAAGAAATG	21
M511	rs17307677	R1a*	T to C	322	264	GGATGAATTGATGAAGAGATGT	CTCAGAGAAAAGACATTTTCAG	21
M512	rs17222146	R1a1a*	C to T	356	161	TGTTCCCTCTGTGAGACTGAGC	CAGAACCATGTCATATCAGG	21
M513	rs17222573	R1a*	A to G	319	137	GAGATCTTCACTGTCTTTTTAC	GTGTATTTGAAATGGTTCAGGTG	21
M514	rs17315926	R1a1a*	C to T	377	245	CTTTTTCTTATGACAAGATTTT	GAATACCTGTTGTATCTTAGC	21
M515	rs17221601	R1a1a*	T to A	233	112	GTATTGTCCATATAAGGTCTCTG	CCAAAGTGCTGGAATTACAGATG	21
M516	rs17307105	R1a1*	A to G	263	173	CTTCTGAACATAAGTGTTTCAGG	AGTCTGGTTTTGGTTAAAAGC	21
none	rs17250901	NT	A to T	380	272	AGAAGAGATTTCTAGCCAGAGT	GGGGTAGAAAATTATTGGTC	21
Page07	rs34297606	R1a1a*	C to T	333	62	CTGACCCCTGACTCCAAGCA	AAAAAAGAAAATGGGGACTCACTG	22
Page68	rs34351054	R1a1a8	C to T	340	41	AGAATTGCTTGAACCTCTCAGAC	GAGATACCTGGAGGTGAGAAG	22
M334	unassigned	R1a1a7a	C to A	499	356	CCTTGGCATTTTGTGGGCTGG	AAAGGGGGCCTGAGTGAGCACT	this study
M434	unassigned	R1a1a6	G to A	325*	213	CCAAAATTAGTGGGGAATAGT	GATCACCCAGGGTCTGGAGTT	this study
M458	unassigned	R1a1a7*	A to G	283	87	AGAAGAGATTTCTAGCCAGAGT	CCAGAAAAAATAATTCCTGGA	this study

\* amplicon size varies since it contains DYS438 pentanucleotide locus

NT=not typed

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**Table S 6**

Population	Haplogroup	DYS19	DYS388	DYS389I	DYS389B	DYS390	DYS391	DYS392	DYS393	DYS439	DYS461
Adygei	R1a1a*	16	12	12	17	25	11	11	13	11	10
Altay	R1a1a*	16	12	14	17	26	11	11	13	11	10
Altay	R1a1a*	16	12	14	17	26	11	11	13	11	10
Altay	R1a1a*	16	12	14	17	26	11	11	13	11	10
Altay	R1a1a*	16	12	14	17	25	11	11	13	11	10
Altay	R1a1a*	16	12	14	17	26	11	11	13	11	10
Altay	R1a1a*	16	12	14	17	26	11	11	13	11	10
Altay	R1a1a*	16	12	14	17	26	11	11	13	11	10
Altay	R1a1a*	16	12	14	18	26	11	11	13	11	10
Altay	R1a1a*	16	12	14	18	25	11	11	13	11	10
Altay	R1a1a*	16	12	14	18	26	11	11	13	11	10
Altay	R1a1a*	16	12	14	18	26	11	11	13	11	10
Altay	R1a1a*	16	12	14	17	26	11	11	13	11	10
Altay	R1a1a*	17	12	13	18	24	11	11	14	10	10
Altay	R1a1a*	16	12	14	18	26	11	11	13	11	10
Austria	R1a1a*	16	12	14	17	25	11	11	13	10	10
Austria	R1a1a*	16	12	14	17	25	10	11	13	10	10
Austria	R1a1a*	16	12	13	16	25	10	11	13	10	10
Austria	R1a1a*	16	12	13	17	25	10	11	13	10	10
Belarus	R1a1a*	16	12	13	17	25	11	11	13	11	10
Belarus	R1a1a*	15	12	13	17	26	11	11	13	10	10
Cambodia	R1a1a*	14	12	14	17	22	11	11	14	12	10
Caucasus	R1a1a*	16	12	14	17	25	11	11	13	11	11
Caucasus	R1a1a*	15	12	13	17	24	11	11	13	10	10
Caucasus	R1a1a*	15	12	12	17	25	11	11	13	10	10
Caucasus	R1a1a*	16	12	13	18	25	11	11	13	10	10
Caucasus	R1a1a*	15	12	13	19	25	10	11	14	10	10
Caucasus	R1a1a*	16	12	12	17	24	11	11	13	11	10
Caucasus	R1a1a*	15	12	12	17	25	11	11	13	10	10
Caucasus	R1a1a*	15	12	13	17	25	10	11	13	10	10
Caucasus	R1a1a*	16	12	13	18	25	12	11	13	10	10
Caucasus	R1a1a*	15	12	13	16	26	10	11	13	12	10
Caucasus	R1a1a*	16	12	14	17	25	10	11	13	12	10

Central Asia	R1a1a*	17	12	13	17	24	11	12	13	10	10
Central Asia	R1a1a*	15	12	13	18	24	10	11	13	10	10
Central Asia	R1a1a*	16	12	14	18	25	10	11	13	12	10
Crete	R1a1a*	15	12	14	16	25	11	11	14	10	10
Crete	R1a1a*	16	12	13	17	25	11	11	13	12	10
Crete	R1a1a*	15	12	13	18	25	11	11	13	10	10
Crete	R1a1a*	16	12	13	17	24	11	11	13	12	10
Crete	R1a1a*	16	12	14	18	25	11	11	13	10	10
Crete	R1a1a*	15	12	13	16	24	10	11	13	10	10
Crete	R1a1a*	16	12	14	16	24	10	11	13	10	10
Crete	R1a1a*	15	13	13	17	23	11	11	13	10	10
Crete	R1a1a*	15	12	13	17	24	11	11	13	10	10
Crete	R1a1a*	16		14	16	25	10	11	13	10	10
Crete	R1a1a*	16	12	13	17	24	11	11		10	10
Crete	R1a1a*	16	12	13	17	25	11	11	13	10	
Czech Republic	R1a1a*	15	12	14	17	25	11	11	13	10	10
Czech Republic	R1a1a*	16	12	14	17	25	11	11	13	10	10
Czech Republic	R1a1a*	15	12	12	17	24	11	11	13	10	9
Denmark	R1a1a*	16	12	13	17	26	10	11	13	10	11
Denmark	R1a1a*	15	12	13	16	26	11	11	13	11	10
Denmark	R1a1a*	15	12	14	17	24	11	11	13	10	10
Denmark	R1a1a*	16	12	13	17	25	11	11	13	10	11
Denmark	R1a1a*	15	12	13	16	24	10	11	13	10	10
Denmark	R1a1a*	15	12	13	17	24	11	11	13	10	10
Denmark	R1a1a*	15	12	13	17	25	10	11	13	10	10
Denmark	R1a1a*	17	12	13	17	25	11	11	13	11	11
Denmark	R1a1a*	15	12	14	17	24	11	11	13	10	10
Denmark	R1a1a*	16	12	13	17	25	11	11	13	10	11
Denmark	R1a1a*	15	12	13	17	24	10	11	13	10	10
Denmark	R1a1a*	15	12	14	17	26	10	11	13	10	11
Egypt	R1a1a*	16	12	13	18	25	10	11	13	10	10
Egypt	R1a1a*	15	12	13	16	24	11	13	13	12	11
Egypt	R1a1a*	15	12	14	17	25	11	11	12	10	10
Egypt	R1a1a*	15	12	14	17	24	11	13	13	12	11

England	R1a1a*	15	12	14	17	25	10	11	13	10	10
Estonia	R1a1a*	15	12	13	17	25	10	11	13	10	10
Estonia	R1a1a*	16	12	13	17	24	10	11	13	10	10
Estonia	R1a1a*	16	12	13	18	25	10	11	13	11	10
Estonia	R1a1a*	16	12	13	17	24	11	10	14	11	10
Estonia	R1a1a*	16	12	13	17	25	10	11	12	11	10
Estonia	R1a1a*	16	12	13	17	25	11	11	13	11	10
Estonia	R1a1a*	16	12	13	17	25	11	11	13	9	10
Estonia	R1a1a*	15	12	13	16	25	11	11	13	10	10
Estonia	R1a1a*	16	12	12	17	25	11	11	13	10	10
Estonia	R1a1a*	16	12	13	17	25	12	11	13	9	10
Estonia	R1a1a*	16	12	14	17	25	11	11	14	10	10
Estonia	R1a1a*	16	12	13	18	26	11	11	13	10	11
Estonia	R1a1a*	16	12	13	17	24	11	11	14	9	10
Estonia	R1a1a*	16	12	13	16	25	10	11	13	10	10
Europe	R1a1a*	16	12	14	17	25	11	11	13	11	11
France	R1a1a*	15	12	13	17	25	11	11	13	10	10
Germany	R1a1a*	15	12	13	17		11			11	10
Germany	R1a1a*	17	12	14	18	25	11	11	13	11	10
Germany	R1a1a*	16	12	12	17	25	11	11	13	12	10
Germany	R1a1a*	16	12	13	17	25	11	11	13	11	10
Germany	R1a1a*	15	12	13	17	25	10	11	13	10	10
Germany	R1a1a*	17	12	13	17	25	11	11	13	11	10
Germany	R1a1a*	17	12	13	17	24	10	11	13	11	10
Germany	R1a1a*	15	12	13	17	24	10	11	13	10	10
Germany	R1a1a*	16	12	13	17	25	10	11	14	10	10
Germany	R1a1a*	16	12	13	17	25	11	11	13	11	10
Germany	R1a1a*	15	12	14	17	25	11	11	13	11	10
Germany	R1a1a*	16	12	13	17	25	10	11	13	10	10
Germany	R1a1a*	16	12	12	18	25	10	11	13	10	10
Germany	R1a1a*	18	12	13	18	25	11	11	13	10	10
Germany	R1a1a*	15	10	13	17	25	10	11	13	10	10
Germany	R1a1a*	16	12	13	17	25	10	11	13	11	10
Germany	R1a1a*	17	12	13	17	25	11	11	13	11	11

Germany	R1a1a*	16	12	13	17	24	10	11	13	11	10
Germany	R1a1a*	17	12	13	18	25	11	11	13	10	10
Germany	R1a1a*	15	12	13	18	25	11	11	14	10	10
Germany	R1a1a*	17	12	14	17	25	11	11	13	11	10
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Germany	R1a1a*	16	12	13	17	25	11	11	13	10	11
Greece	R1a1a*	16	12	13	17	26	11	11	13	10	10
Greece	R1a1a*	16	12	13	17	24	11	11	13	10	10
Greece	R1a1a*	15	12	12	17	25	11	11	13	10	10
Greece	R1a1a*	16	12	13	17	24	11	11	13	10	10
Greece	R1a1a*	15	12	13	17	24	10	11	13	10	10
Greece	R1a1a*	17	12	14	19	25	10	11	13	10	10
Greece	R1a1a*	16	12	13	17	24	11	11	13	10	10
Greece	R1a1a*	16	12	13	17	24	11	11	13	10	10
Greece	R1a1a*	16	12	14	17	25	11	11	13	10	10
Greece	R1a1a*	16	12	13	18	26	11	11	13	10	10
Greece	R1a1a*	15	12	12	17	24	11	11	13	10	10
Greece	R1a1a*	16	12	13	17	25	11	11	13	11	10
Greece	R1a1a*	17	12	13	17	25	10	11	13	11	11
Hungarian	R1a1a*	15	12	13	17	25	10	11	13	9	10
Hungarian	R1a1a*	15	12	13	16	25	10	11	13	11	10
Hungarian	R1a1a*	15	12	13	17	25	10	11	13	10	10
Hungarian	R1a1a*	15	12	13	18	25	10	11	13	10	10
Hungarian	R1a1a*	15	12	13	17	25	11	11	13	12	11
Hungarian	R1a1a*	15	12	13	17	25	11	11	13	11	10
Hungarian	R1a1a*	16	12	13	16	24	10	11	13	10	10
Hungarian	R1a1a*	16	12	13	17	25	10	11	13	10	10
Hungarian	R1a1a*	16	13	13	18	25	10	11	13	10	10
Hungarian	R1a1a*	16	12	12	18	25	11	11	13	10	10

Hungarian	R1a1a*	16	12	13	17	25	11	11	13	10	10
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Hungarian	R1a1a*	16	12	14	17	26	11	11	13	10	10
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Hungarian	R1a1a*	17	12	13	16	25	11	11	13	10	10
India	R1a1a*	16	12	14	18	25	12	11	13	10	10
India	R1a1a*	16	12	13	17	25	12	11	13	10	10
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India	R1a1a*	16	12	13	17	24	11	11	13	10	10
India	R1a1a*	15	12	13	18	25	10	11	14	10	10
India	R1a1a*	16	12	13	17	24	10	11	14	10	10
India	R1a1a*	17	12	13	17	24	11	13	13	11	12
India	R1a1a*	15	12	13	18	25	11	11	13	10	10
India	R1a1a*	15	12	13	18	25	11	11	13	10	10
India	R1a1a*	15	12	13	18	25		11	13	10	10
India	R1a1a*	15	12	13	18	24	11	11	13	10	10
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India	R1a1a*	16	12	13	18	25	11	11	13	10	10
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India	R1a1a*	16	12	13	18	24	11	11	13	10	10
India	R1a1a*	15	12	14	17	25	10	11	13	10	10
India	R1a1a*	15	12	14	17	24	11	11	13	10	10
India	R1a1a*	15	12	14	18	24	10	11	13	10	10
India	R1a1a*	16	12	13	18	25	11	11	13	10	10
India	R1a1a*	15	12	13	17	25	11	11	13	10	10
India	R1a1a*	17	12	13	17	25	10	11	13	10	10
India	R1a1a*	15	12	13	17	25	11	11	13	10	10
India	R1a1a*	16	12	14	18	25	12	11	13	10	10



India	R1a1a*	15	12	13	15	25	10	11	13	10	10
India	R1a1a*	16	13	13	19	24	11	11	13	10	10
India	R1a1a*	16	12	14	17	25	11	11	13	10	10
India	R1a1a*	17	12	13	18	25	11	11	13	10	10
India	R1a1a*	17	13	13	18	26	11	11	13	10	10
India	R1a1a*	16	12	13	18	24	10	12	13	10	10
India	R1a1a*	15	12	13	18	25	10	11	13	10	10
India	R1a1a*	15	12	13	18	25	10	11	12	10	10
India	R1a1a*	15	12	13	20	25	10	11	15	10	12
India	R1a1a*	16	12	14	17	25	10	11	14	10	10
India	R1a1a*	16	12	13	18	24	10	11	13	10	10
India	R1a1a*	15	12	13	18	24	11	11	13	10	10
India	R1a1a*	16	12	13	18	25	10	11	13	10	10
India	R1a1a*	16	13	13	17	24	11	11	13	10	10
India	R1a1a*	17	12	13	17	23	11	11	13	10	11
India	R1a1a*	15	12	14	17	25	10	11	13	11	10
India	R1a1a*	16	12	14	17	25	12	11	13	10	10
India	R1a1a*	15	12	14	18	25	10	11	13	10	10
India	R1a1a*	15	12			22	10	10	13	10	12
India	R1a1a*	16	12	14	17	24	11	11	13	10	10
India	R1a1a*	16	12	14	17	25	12	11	13	10	10
India	R1a1a*	15	12	13	18	25	11	11	13	10	10
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Russia	R1a1a*	16	12	13	17	25	11	11	13	10	10
Russia	R1a1a*	16	12	13	17	25	11	11	13	10	10
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Russia	R1a1a*	14	12	14	17	25	11	11	13	10	11
Russia	R1a1a*	12	12	13	16	25	11	11	13	10	10
Russia	R1a1a*	16	12	13	17	25	11	11	13	10	11
Russia	R1a1a*	15	12	13	18	24	11	11	14	10	10
Russia	R1a1a*	14	12	13	16	25	11	11	13	10	10
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UAE	R1a1a*	15	12	13	16	26	11	11	14	10	9
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Estonia	R1a1a7*	16	12	13	16	24	10	11	13	11	10
Estonia	R1a1a7*	16	12	13	17	25	10	11	13	11	10
Estonia	R1a1a7*	17	12	13	17	25	10	11	13	10	10
Estonia	R1a1a7*	17	12	13	17	25	10	11	13	11	10
Germany	R1a1a7*	17	12	13	17	25	11	11	13	10	10
Germany	R1a1a7*	16	12	13	16	26	10	11	13	11	10
Germany	R1a1a7*	17	12	13	17	25	10	11	13	10	10
Germany	R1a1a7*	17	12	13	17	25	10	11	13	10	10
Germany	R1a1a7*	16	12	13	16	25	10	11	13	11	10

Germany	R1a1a7*	16	12	13	17	25	10	11	13	11	10
Germany	R1a1a7*	16	12	13	16	25	10	11	13	11	10
Germany	R1a1a7*	16	12	14	16	24	10	11	14	11	10
Germany	R1a1a7*	18	12	13	16	25	10	11	13	13	10
Germany	R1a1a7*	16	12	13	16	26	10	11	13	11	10
Germany	R1a1a7*	16	12	13	16	25	10	11	13	11	10
Germany	R1a1a7*	16	12	14	16	25	10	11	13	11	10
Germany	R1a1a7*	16	12	12	17	25	10	11	13	10	10
Germany	R1a1a7*	16	12	13	16	25	10	11	13	11	10
Germany	R1a1a7*	16	12	12	16	26	10	11	12	11	10
Greece	R1a1a7*	16	12	13	16	25	10	11	13	11	10
Greece	R1a1a7*	16	12	13	16	25	10	11	13	12	10
Greece	R1a1a7*	16	12	13	16	25	10	11	13	11	10
Greece	R1a1a7*	16	12	13	16	25	10	11	13	11	10
Greece	R1a1a7*	16	12	13	16	25	10	11	13	11	10
Greece	R1a1a7*	16	12	13	16	25	10	11	13	11	10
Hungarian	R1a1a7*	17	12	13	17	25	10	11	13	10	10
Hungarian	R1a1a7*	17	12	13	18	25	10	11	13	12	11
Hungarian	R1a1a7*	17	12	14	17	25	10	11	13		
Hungarian	R1a1a7*	17	12	13	16	25	10	11	13	11	10
Hungarian	R1a1a7*	18	12	13	17	25	10	11	13	12	10
Karelian	R1a1a7*	16	12	13	16	25	10	11	13	12	10
Karelian	R1a1a7*	16	12	13	16	25	10	11	13	11	10
Karelian	R1a1a7*	16	12	13	16	24	10	11	13	12	10
Karelian	R1a1a7*	16	12	13	16	25	10	11	13	11	10
Karelian	R1a1a7*	15	12	13	16	24	10	11	13	11	10
Karelian	R1a1a7*	16	12	13	16	24	10	11	13	11	10
Karelian	R1a1a7*	16	12	13	16	25	10	11	13	11	10
Karelian	R1a1a7*	16	12	13	16	25	10	11	13	11	10
Karelian	R1a1a7*	16	12	14	16	25	10	11	13	11	10
Karelian	R1a1a7*	16	12	13	16	24	10	11	13	11	10
Karelian	R1a1a7*	16	12	13	16	24	10	11	13	11	10
Karelian	R1a1a7*	16	12	13	16	24	10	11	13	11	10
Karelian	R1a1a7*	16	12	13	16	24	10	11	13	11	10
Netherlands	R1a1a7*	15	12	13	16	26	10	11	13	11	10

Netherlands	R1a1a7*	15	12	13	16	25	10	11	13	11	10
Poland	R1a1a7*	17	12	13	17	26	10	11	13	10	11
Poland	R1a1a7*	18	12	13	17	26	10	11	13	10	10
Poland	R1a1a7*	17	12	13	17	25	10	11	13	10	10
Poland	R1a1a7*	16	12	13	17	25	10	11	13	12	10
Poland	R1a1a7*	16	12	13	17	25	10	11	13	12	10
Poland	R1a1a7*	16	12	13	16	25	10	11	13	11	10
Poland	R1a1a7*	17	12	13	17	25	12	11	13	10	10
Poland	R1a1a7*	15	12	13	16	24	10	11	13	11	10
Poland	R1a1a7*	17	12	13	17	25	10	11	13	10	10
Poland	R1a1a7*	17	12	13	16	24	10	11	13	10	10
Poland	R1a1a7*	15	12	14	17	25	10	11	13	11	10
Poland	R1a1a7*	17	12	13	17	25	10	10	13	10	10
Poland	R1a1a7*	17	12	13	17	25	10	11	13	11	10
Poland	R1a1a7*	15	12	13	16	26	10	11	13	12	10
Poland	R1a1a7*	16	12	13	16	26	10	11	13	11	10
Poland	R1a1a7*	16	12	13	16	25	10	11	13	11	10
Poland	R1a1a7*	16	12	13	17	25	10	11	13	11	10
Poland	R1a1a7*	16	12	13	16	25	10	11	13	11	10
Poland	R1a1a7*	17	12	12	17	24	10	11	13	10	10
Poland	R1a1a7*	17	12	13	19	25	10	11	13	10	10
Poland	R1a1a7*	17	12	13	18	25	10	11	13	10	10
Poland	R1a1a7*	15	12	13	16	26	10	11	13	11	10
Poland	R1a1a7*	17	12	13	17	25	10	11	13	10	10
Poland	R1a1a7*	17	12	14	17	25	10	11	13	10	10
Poland	R1a1a7*	17	12	13	17	25	10	11	13	12	10
Poland	R1a1a7*	17	12	13	17	25	10	11	13	10	10
Poland	R1a1a7*	17	12	13	17	25	11	11	13	10	10
Russia	R1a1a7*	17	12	13	16	24	10	11	13	11	10
Russia	R1a1a7*	17	12	13	17	24	10	11	13	12	10
Russia	R1a1a7*	17	12	13	17	24	10	11	13	11	10
Russia	R1a1a7*	16	12	13	15	25	10	11	13	11	10
Russia	R1a1a7*	17	12	13	17	24	10	11	13	11	10
Russia	R1a1a7*	16		13	18		11	11	13	11	10

Russia	R1a1a7*	16	12	13	16	24	11	11	13	11	10
Russia	R1a1a7*	15	12	13	16	25	10	11	13	11	10
Russia	R1a1a7*	16	12	14	16	25	10	11	13	11	10
Russia	R1a1a7*	17	12	13	16	25	10	11	14	11	10
Russia	R1a1a7*	16	12	13	16	24	10	11	13	11	10
Russia	R1a1a7*	17	12	13	16	25	10	11	13	10	10
Slovakia	R1a1a7*	15	12	13	17	25	10	11	13	12	10
Slovakia	R1a1a7*	15	12	13	16	24	10	11	13	11	10
Slovakia	R1a1a7*	16	12	13	17	24	10	11	13	9	10
Slovakia	R1a1a7*	16	12	13	17	25	10	11	13	10	11
Slovakia	R1a1a7*	16	12	13	17	25	10	11	13	10	11
Slovakia	R1a1a7*	16	12	13	17	25	10	11	13	10	10
Slovakia	R1a1a7*	16	12	13	17	25	10	11	13	10	10
Slovakia	R1a1a7*	16	12	13	17	25	10	11	13	10	10
Slovakia	R1a1a7*	16	12	13	17	25	10	11	13	10	10
Slovakia	R1a1a7*	16	12	13	17	25	10	11	13	10	10
Slovakia	R1a1a7*	16	12	13	17	25	10	11	13	11	10
Slovakia	R1a1a7*	16	12	13	18	25	10	11	13	10	11
Slovakia	R1a1a7*	16	12	14	18	25	10	11	12	10	10
Slovakia	R1a1a7*	16	12	13	16	25	10	11	13	11	10
Slovakia	R1a1a7*	16	12	13	16	25	10	11	13	11	10
Slovakia	R1a1a7*	16	12	13	16	24	10	11	13	11	10
Slovakia	R1a1a7*	16	12	13	16	25	10	11	13	11	10
Slovakia	R1a1a7*	16	12	13	16	25	10	11	13	11	10
Slovakia	R1a1a7*	16		13	16	25	10	11	13	11	10
Slovakia	R1a1a7*	16	12	13	16	25	10	11	13	11	10
Slovakia	R1a1a7*	16	12	13	16	25	10	11	13	11	10
Slovakia	R1a1a7*	16	12	13	16	25	10	11	13	11	10
Slovakia	R1a1a7*	16	12	13	16	25	10	11	13	11	10
Slovakia	R1a1a7*	16	12	13	16	25	10	11	13	11	10
Slovakia	R1a1a7*	16	12	13	16	25	10	11	13	11	10
Slovakia	R1a1a7*	16	12	13	16	25	10	11	13	11	10
Slovakia	R1a1a7*	16	12	13	16	26	10	11	13	11	10
Slovakia	R1a1a7*	16	12	13	16	26	10	11	13	11	10
Slovakia	R1a1a7*	16	12	13	17	24	10	11	13	12	10
Slovakia	R1a1a7*	16	12	13	17	25	10	11	13	11	10

Slovakia	R1a1a7*	16	12	13	17	25	11	11	13	11	10
Slovakia	R1a1a7*	16	12	14	17	25	10	11	13	11	10
Slovakia	R1a1a7*	16	12	13	16	25	10	11	12	11	10
Slovakia	R1a1a7*	17	12	12	17	25	10	11	13	12	10
Slovakia	R1a1a7*	17	12	13	17	25	10	11	13	10	10
Slovakia	R1a1a7*	17	12	13	17	24	11	11	13	10	10
Slovakia	R1a1a7*	17	12	13	17	25	10	11	13	11	10
Slovakia	R1a1a7*	17	12	13	19	25	10	11	13	11	10
Slovakia	R1a1a7*	17	12	13	16	25	10	11	12	10	10
Slovakia	R1a1a7*	17	12	13	17	25	10	11	13	10	11
Slovakia	R1a1a7*	17	12	14	17	25	10	11	13	11	10
Slovakia	R1a1a7*	17	12	14	17	25	10	11	13	10	10
Slovakia	R1a1a7*	17	12	13	17	25	10	11	13	10	10
Slovakia	R1a1a7*	17	12	13	17	25	10	11	13	10	10
Slovakia	R1a1a7*	17	12	13	17	24	10	11	13	11	10
Slovakia	R1a1a7*	17	12	14	16	24	10	11	13	10	10
Slovakia	R1a1a7*	17	12	13	17	24	10	11	13	10	10
Slovakia	R1a1a7*	17	12	14	17	24	10	11	13	10	10
Slovakia	R1a1a7*	17	12	14	17	24	10	11	13	10	10
Slovakia	R1a1a7*	17	12	13	17	23	10	11	13	10	10
Slovakia	R1a1a7*	17	12	13	17	25	10	11	12	10	10
Slovakia	R1a1a7*	17	12	13	17	26	10	11	14	11	10
Slovakia	R1a1a7*	17	12	13	17	24	10	11	13	10	10
Slovakia	R1a1a7*	17	12	13	18	24	10	11	13	10	10
Slovakia	R1a1a7*	18	12	13	17	24	10	11	13	10	10
Slovakia	R1a1a7*	16	12	13	17	24	10	11	13	11	10
Slovakia	R1a1a7*	16	12	13	17	24	10	11	13	10	9
Slovakia	R1a1a7*	15	12	13	16	25	10	11	13	11	10
Slovenia	R1a1a7*	17	12	13	17	26	10	11	14	10	10
Slovenia	R1a1a7*	16	12	13	16	25	10	11	13	11	10
Slovenia	R1a1a7*	17	12	13	17	24	10	11	13	12	10
Turkey	R1a1a7*	16	12	13	16	26	10	11	13	11	10
Turkey	R1a1a7*	16	12	13	16	25	10	11	13	11	10
Turkey	R1a1a7*	16	11	13	15	25	10	11	13	11	10

Ukraine	R1a1a7*	16	12	13	16	25	10	11	13	11	10
Ukraine	R1a1a7*	17	12	13	17	25	10	11	13	10	11
Ukraine	R1a1a7*	15	12	13	16	25	10	11	13	11	10
Ukraine	R1a1a7*	17	12	14	17	25	10	11	13	10	10
Ukraine	R1a1a7*	16	12	13	16	25	10	11	13	11	10
Ukraine	R1a1a7*	16	12	13	16	25	10	11	13	11	10
Ukraine	R1a1a7*	16	12	13	16	25	10	11	13	11	10
Vepsa	R1a1a7*	16	12	13	16	26	10	11	13	11	10
Vepsa	R1a1a7*	16	12	13	16	25	10	11	13	11	10
Vepsa	R1a1a7*	16	12	13	17	25	10	11	13	11	10
Vepsa	R1a1a7*	16	12	13	16	25	10	11	13	11	10
Vepsa	R1a1a7*	16	12	13	16	25	10	11	13	12	10
Vepsa	R1a1a7*	15	12	13	16	25	10	11	13	11	10

**Table S 7**

Population	Haplogroup	DYS19	DYS388	DYS389I	DYS389B	DYS390	DYS391	DYS392	DYS393	DYS439	DYS461	DYS385
Austria	R1a1a*	16	12	14	17	25	11	11	13	10	10	11-14
Austria	R1a1a*	16	12	13	16	25	10	11	13	10	10	11-15
Austria	R1a1a*	16	12	14	17	25	10	11	13	10	10	11-14
Austria	R1a1a*	16	12	13	17	25	10	11	13	10	10	11-14
Belarus	R1a1a*	16	12	13	17	25	11	11	13	11	10	11-14
Belarus	R1a1a*	15	12	13	17	26	11	11	13	10	10	11-14
Czech Republic	R1a1a*	16	12	14	17	25	11	11	13	10	10	11-15
Czech Republic	R1a1a*	15	12	12	17	24	11	11	13	10	9	11-14
Czech Republic	R1a1a*	15	12	14	17	25	11	11	13	10	10	11-14
Denmark	R1a1a*	16	12	13	17	26	10	11	13	10	11	11-14
Denmark	R1a1a*	15	12	13	16	26	11	11	13	11	10	11-15
Denmark	R1a1a*	15	12	13	16	24	10	11	13	10	10	11-14
Denmark	R1a1a*	16	12	13	17	25	11	11	13	10	11	11-14
Denmark	R1a1a*	15	12	13	17	24	11	11	13	10	10	11-14
Denmark	R1a1a*	15	12	14	17	24	11	11	13	10	10	11-14
Denmark	R1a1a*	15	12	13	17	25	10	11	13	10	10	11-15
Denmark	R1a1a*	15	12	14	17	24	11	11	13	10	10	11-14
Denmark	R1a1a*	17	12	13	17	25	11	11	13	11	11	11-13
Denmark	R1a1a*	15	12	13	17	24	10	11	13	10	10	11-15
Denmark	R1a1a*	15	12	14	17	26	10	11	13	10	11	11-14
Denmark	R1a1a*	16	12	13	17	25	11	11	13	10	11	11-14
England	R1a1a*	15	12	14	17	25	10	11	13	10	10	10-14
France	R1a1a*	15	12	13	17	25	11	11	13	10	10	10-14
Germany	R1a1a*	15	12	14	17	25	11	11	13	11	10	11-15
Germany	R1a1a*	16	12	13	17	25	10	11	14	10	10	11-14
Germany	R1a1a*	15	12	13	17	24	10	11	13	10	10	11-14
Germany	R1a1a*	17	12	14	18	25	11	11	13	11	10	11-14
Germany	R1a1a*	17	12	13	17	25	11	11	13	11	10	11-15
Germany	R1a1a*	15	12	13	17	25	10	11	13	10	10	10-14
Germany	R1a1a*	16	12	13	17	25	11	11	13	11	10	11-15
Germany	R1a1a*	17	12	13	17	24	10	11	13	11	10	11-14
Germany	R1a1a*	16	12	13	17	25	11	11	13	11	10	11-14

Germany	R1a1a*	16	12	12	17	25	11	11	13	12	10 11-15
Germany	R1a1a*	16	12	13	17	25	10	11	13	11	10 11-14
Germany	R1a1a*	15	10	13	17	25	10	11	13	10	10 11-15
Germany	R1a1a*	16	12	13	17	24	10	11	13	11	10 11-14
Germany	R1a1a*	16	12	12	18	25	10	11	13	10	10 11-15
Germany	R1a1a*	18	12	13	18	25	11	11	13	10	10 11-13
Germany	R1a1a*	17	12	13	17	25	11	11	13	11	11 11-13
Germany	R1a1a*	17	12	13	18	25	11	11	13	10	10 11-14
Germany	R1a1a*	16	12	13	17	25	10	11	13	10	10 11-14
Germany	R1a1a*	15	12	13	18	25	11	11	14	10	10 11-14
Germany	R1a1a*	17	12	14	17	25	11	11	13	11	10 11-14
Germany	R1a1a*	15	13	13	18	24	11	11	13	10	10 11-14
Germany	R1a1a*	15	12	13	17	25	11	11	13	10	10 11-14
Germany	R1a1a*	15	12	13	17	25	10	11	13	10	10 11-14
Germany	R1a1a*	17	12	13	17	25	11	11	13	11	10 10-14
Germany	R1a1a*	16	12	13	17	25	11	11	13	10	11 11-15
Germany	R1a1a*	16	12	13	15	25	11	11	13	10	10 11-14
Germany	R1a1a*	17	12	13	17	25	10	11	13	10	10 11-14
Greece	R1a1a*	15	12	13	18	25	11	11	13	10	9 11-15
Ireland	R1a1a*	15	12	13	17	25	10	11	13	10	10 11-14
Ireland	R1a1a*	15	10	14	17	25	10	11	13	10	10 11-14
Ireland	R1a1a*	17	12	13	18	25	11	11	13	10	10 11-14
Italy	R1a1a*	16	12	14	17	25	10	11	14	10	10 10-14
Italy	R1a1a*	15	12	13	16	25	10	11	13	11	10 11-16
Italy	R1a1a*	16	12	12	18	25	11	11	13	10	10 11-15
Italy	R1a1a*	16	12	14	17	25	10	11	13	10	10 11-14
Italy	R1a1a*	17	12	13	18	25	11	11	14	10	10 11-14
Italy	R1a1a*	16	12	13	17	25	10	11	13	11	11 11-13
Italy	R1a1a*	16	12	13	18	25	10	11	13	10	10 11-11
Italy	R1a1a*	15	12	13	17	25	11	11	14	10	11 11-14
Italy	R1a1a*	17	12	13	18	25	11	11	13	10	10 11-16
Italy	R1a1a*	16	12	13	17	25	10	11	13	10	10 11-14
Italy	R1a1a*	16	12	13	17	25	10	11	13	10	10 11-14
Italy	R1a1a*	16	12	13	17	25	10	11	13	11	10 11-14





Kyrgyzstan	R1a1a*	15	12	14	18	25	11	11	13	10	10 11-14
Kyrgyzstan	R1a1a*	16							13		10
Kyrgyzstan	R1a1a*	16	12	15	17	25	10	11	13	10	10 11-14
Kyrgyzstan	R1a1a*	16							13		10
Kyrgyzstan	R1a1a*	16	12	13	18	25	11	11	13	10	10 11-14
Kyrgyzstan	R1a1a*	16	12	13	16	25	11	11	13	10	10 11-14
Kyrgyzstan	R1a1a*	16	12	14	17	24	11	11	13	10	10 11-14
Kyrgyzstan	R1a1a*	17	12	13	18	25	11	11	13	10	10 11-14
Kyrgyzstan	R1a1a*	16	12	13	18	25	11	11	13	10	10 11-14
Kyrgyzstan	R1a1a*	16	12	13	18	24	11	11	13	10	10 11-14
Kyrgyzstan	R1a1a*	16	12	14	18	24	11	11	13	10	10 11-14
Kyrgyzstan	R1a1a*	16							13		10
Kyrgyzstan	R1a1a*	16	12	14	18	25	10	11	13	10	10 11-14
Kyrgyzstan	R1a1a*	16	12	14	17	25	11	11	13	10	10 11-14
Kyrgyzstan	R1a1a*	16	12	14	18	25	11	11	13	11	10 11-14
Kyrgyzstan	R1a1a*	16	12	13	18	25	11	11	13	10	10 11-14
Kyrgyzstan	R1a1a*	16	12	14	17	25	11	11	13	10	10 11-14
Kyrgyzstan	R1a1a*	16	12	13	18	24	11	11	13	10	10 11-14
Kyrgyzstan	R1a1a*	16	12	14	18	25	11	11	13	10	10 11-14
Kyrgyzstan	R1a1a*	16	12	14	17	25	11	11	13	10	10 11-14
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Kyrgyzstan	R1a1a*	16	12	14	18	25	11	11	13	10	10 11-14
Kyrgyzstan	R1a1a*	16							13		10
Kyrgyzstan	R1a1a*	16	12	14	18	25	12	11	13	10	10 11-14
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Kyrgyzstan	R1a1a*	16	12	14	18	25	10	11	13	10	10 11-14
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Russia	R1a1a*	14	12	14	17	25	11	11	13	10	11 11-15
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Slovenia	R1a1a*										
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Slovenia	R1a1a*	15	12	13	17	25	10	11	13	10	10 11-14
Switzerland	R1a1a*	15	12	13	17	25	10	11	13	10	10 11-14
Switzerland	R1a1a*	16	13	13	18	24	11	11	14	10	10 11-14
Switzerland	R1a1a*	16	12	13	18	25	11	11	14	10	10 11-14
Ukraine	R1a1a*	18	12	13	17	25	11	11	13	11	10 9-13
Ukraine	R1a1a*	16	12	13	16	25	11	11	13	10	10 11-14
Ukraine	R1a1a*	16	12	13	17	25	10	11	13	10	10 11-14
Austria	R1a1a7*	17	12	14	17	25	10	11	13	10	10 10-14
Czech Republic	R1a1a7*	16	12	13	16	25	10	11	13	11	10 11-14
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Denmark	R1a1a7*	16	12	13	17	25	10	11	13	11	10 11-14
Germany	R1a1a7*	16	12	13	16	25	10	11	13	11	10 11-14
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Germany	R1a1a7*	17	12	13	17	25	10	11	13	10	10 10-15
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Germany	R1a1a7*	18	12	13	16	25	10	11	13	13	10 11-14
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Netherlands	R1a1a7*	15	12	13	16	25	10	11	13	11	10 11-15
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Poland	R1a1a7*	17	12	13	17	25	10	11	13	12	10 10-14

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Russia	R1a1a7*	17	12	13	16	25	10	11	13	10	10 10-14
Slovakia	R1a1a7*	16	12	13	17	24	10	11	13	10	9 10-14
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Slovenia	R1a1a7*	17	12	13	17	26	10	11	14	10	10 10-14
Slovenia	R1a1a7*										
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Ukraine	R1a1a7*	16	12	13	16	25	10	11	13	11	10 11-14
Ukraine	R1a1a7*	16	12	13	16	25	10	11	13	11	10 11-14

DYS426	DYS437	DYS438	DYS441	DYS442	DYS444	DYS445	DYS446	DYS447	DYS448	DYS449	DYS452	DYS454	DYS455
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