

Subclade	Number of samples	SNP tested	NGS tested	Predicted by STRs	Academic Samples	Sample Numbers
J-Z640		13		1		WL928, WL697, WL642, WL173, WL709, WL075, WL401, WL405, WL123*, WL094, WL758, WL018, WL032
J-FGC5230	39	1		38		WL566, WL114*, WL604*, WL189*, WL645*, WL247*, WL522*, WL857*, WL014*, WL211*, WL884*, WL502*, WL892*, WL862*, WL183*, WL350*, WL355*, WL314*, WL128*, WL514*, WL654*, WL271*, WL202*, WL340*, WL207*, WL407*, WL563*, WL567*, WL249*, WL380*, WL363*, WL553*, WL730*, WL860*, WL640*, WL923*, WL685*, WL518*, WL192*
J-FGC5206	1	1				WL121
J-FGC57170	1		1			WL571
J-FGC57173	3	1	2			WL932, WL683, WL527
J-FGC59084	1		1			WL035
J-FGC60670	2		2			WL933, WL406
J-FGC59116	3	2	1			WL175, WL803, WL127
J-FGC5215	4		4			WL977, WL624, WL587, WL165
J-FGC5229	9	4	5			WL411, WL463, WL333, WL735, WL410, WL303, WL895, WL643, WL313
J-FGC59164	1		1			WL942
J-FGC41680	2		2			WL031, WL537
J-FGC60705	2	1	1			WL815, WL706
J-Z2293	2	1		1		WL158, WL252***
J-Z642	10	3	1	6		WL704, WL150, WL275*, WL147*, WL163*, WL719*, WL447, WL722, WL594*, WL639****
J-ZS1380	1		1			WL387
J-FGC30542	1	1				WL074
J-Z2285	2	1	1			WL859
J-FGC30543	2		2		EGAZ0000101 4942	WL544
J-FGC62618	2		2			WL861, WL329
J-ZS1370	1		1			WL317
J-Z2272	2	1	1			WL089, WL392
J-Z2289	4		4		HG01069, HG01935, HG01937	WL720
J-FGC30545	2	1	1			WL287, WL968
J-ZS5768	1		1			WL142
J-Z27721	3		3		HG01130, HG01437	WL464
J-FGC62702	2		2			WL053, WL785
J-FGC30546	2		2			WL106, WL308
J-BY74	15	13		2		WL549, WL184, WL185, WL602*, WL729**, WL568, WL650, WL833, WL120, WL927, WL766, WL335, WL820, WL627, WL029, WL045
J-Y22688	1		1			WL637
J-ZS1431	2		2		SRR2098265	WL516, WL394
J-ZS1409	1		1		SRR2098241	
J-ZS1342	3	2	1			WL703, WL738, WL449
J-FGC54385	5		2	2		WL098, WL480, WL678*, WL025*

\* Predicted by STRs

\*\* Predicted by STRs to be J-BY74, confirmed Z640

\*\*\* Predicted by STRs to be J-Z2293, confirmed Z640

\*\*\*\*Predicted by STRs to be J-Z642, confirmed Z640

Totals	SNP tested	NGS tested	Predicted by STRs	Total
J-Z640	13	0	1	14
J-FGC5230	10	20	38	68
J-Z2293	8	22	7	37
J-BY74	13	4	2	19
J-ZS1342	2	1	0	3
J-FGC54385	0	2	2	4
Total	46	49	50	145

Supplementary Table 1. Sample testing statistics

<b>Sample ID</b>	<b>Source</b>
EGAZ00001014942	Francalacci, et. al., 2013, 2015
HG01069	1000 GENOMES PROJECT
HG01130	1000 GENOMES PROJECT
HG01437	1000 GENOMES PROJECT
HG01935	1000 GENOMES PROJECT
HG01937	1000 GENOMES PROJECT
SRR2098241	Rodriguez-Flores 2016
SRR2098265	Rodriguez-Flores 2016

**Supplementary Table 2 - Academic Samples**

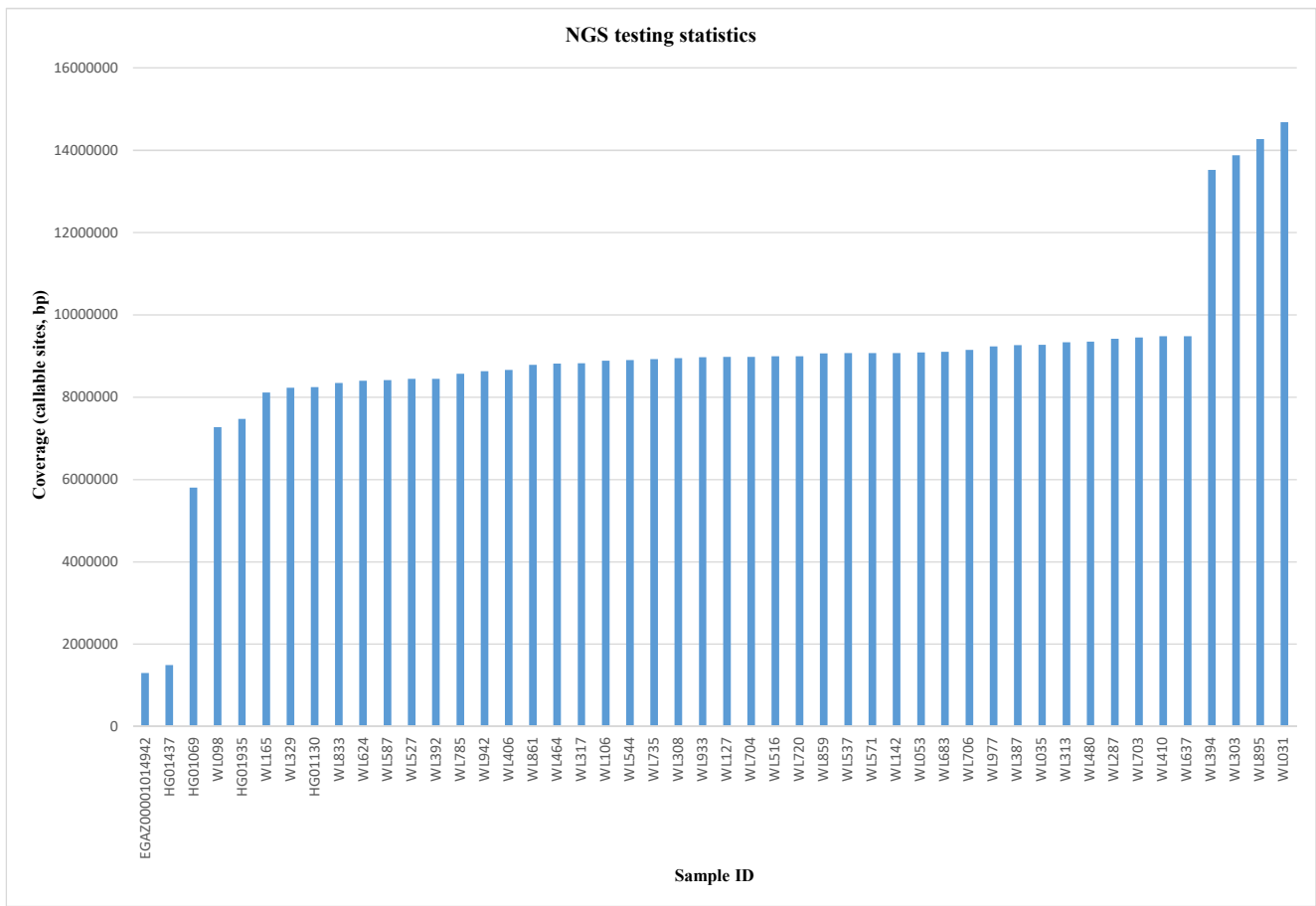
Sample ID	Terminal novel variant	Terminal shared SNP	Ethnic / Religious Group	Geographic location of most distant paternal ancestor
WL480	FGC54385	FGC54385	European American	United States
WL098	FGC54385	FGC54385	European American	United States
WL587	FGC65925	FGC5215	Ashkenazi Jewish	Poland
WL895	FGC15762	FGC5229	Ashkenazi Jewish	Lithuania
WL303	FGC5231	FGC5229	Ashkenazi Jewish	Lithuania
WL942	FGC59163	FGC59164	Ashkenazi Jewish	Ukraine
WL566	ZS5771	FGC5230	Arab	Homs, Syria
WL803	FGC59116	FGC59116	Ashkenazi Jewish	Russia
WL175	FGC59116	FGC59116	Ashkenazi Jewish	Eastern Europe
WL127	FGC59117	FGC59116	Ashkenazi Jewish	Eastern Europe
WL518	FGC60705	FGC60705	Ashkenazi Jewish	Belarus
WL706	FGC60704	FGC60705	Sephardic Jewish	Turkey
WL410	FGC59066	FGC5229	Ashkenazi Jewish	England
WL735	FGC60652	FGC5229	Ashkenazi Jewish	Ukraine
WL313	FGC63757	FGC5229	Ashkenazi Jewish	Ukraine
WL411	FGC5229	FGC5229	Ashkenazi Jewish	Germany
WL333	FGC5229	FGC5229	Ashkenazi Jewish	Poland
WL643	FGC5229	FGC5229	Ashkenazi Jewish	Ukraine
WL537	FGC62565	FGC41680	Ashkenazi Jewish	Ukraine
WL031	FGC41681	FGC41680	Ashkenazi Jewish	Ukraine
WL624	FGC62573	FGC5215	Ashkenazi Jewish	Russia
WL977	FGC23368	FGC5215	Ashkenazi Jewish	Poland
WL165	FGC59170	FGC5215	Ashkenazi Jewish	Ukraine
WL035	FGC59081	FGC59084	Iberian	Mexico
WL933	FGC60670	FGC60670	Iberian	Lepe, Spain
WL406	FGC62728	FGC60670	Iberian	Lepe, Spain
WL571	FGC62738	FGC57170	Iberian	Chile
WL683	FGC64317	FGC57173	Iberian	Mexico
WL527	FGC57171	FGC57173	Iberian	Mexico
WL932	FGC57173	FGC57173	Iberian	Mexico
WL637	Y22688	Y22688	Arab	United Arab Emirates
WL516	ZS1425	ZS1431	Arab	Saudi Arabia
WL394	FGC67964	ZS1431	Arab	Saudi Arabia
WL703	ZS1342	ZS1342	Arab	Saudi Arabia
WL704	FGC54385	Z642	Arab	Saudi Arabia
WL720	Z27745	Z2289	Sephardic Jewish	Italy
WL861	FGC62604	FGC62618	Druze	Lebanon
WL106	FG30555	FGC30546	Sephardic Jewish	Portugal
WL859	FGC664263	Z2285	Armenian	Nigde, Turkey
WL544	FGC62679	FGC30543	Turkish	Cappadocia, Turkey
WL785	FGC62718	FGC62702	European American	Germany
WL287	ZS7573	FGC30545	Arab	United Arab Emirates
WL392	FGC59171	Z2272	Iberian	Puerto Rico
WL464	FGC62751	Z27721	Iberian	Spain
WL308	FGC64322	FGC30546	Sephardic Jewish	Syria
WL142	A7914	ZS5768	Arab	Iraq
WL387	ZS1380	ZS1380	Arab	Saudi Arabia
WL053	A17372	FGC62702	European American	Germany
WL329	FGC65933	FGC62618	Samaritan	Israel
WL317	FGC85443	ZS1370	Arab	Idlib, Jordan
WL833	FGC73993	BY74	Arab (Christian)	Palestine
WL089	Z2272	Z2272	Iberian	Cuba
WL074	FGC30542	FGC30542	Arab	Iraq
WL158	Z2293	Z2293	Arab	United Arab Emirates

\* excludes YFull and academic samples

Supplementary Table 3. Phylogenetic information of Individuals included in the Phylogenetic Tree

SNPs	Equivalents
Z640	Z641, Z644, FGC5205
FGC5230	FGC5232, FGC5239
FGC5206	FGC5211, FGC5216, FGC5217, FGC5218, FGC5220, FGC5221, FGC5223, FGC5225, FGC5226, FGC5228, FGC5234, FGC5245, FGC7982, FGC23372
FGC5215	FGC5219, FGC5224, FGC5241
FGC59084	FGC59085, FGC59086, FGC59093
FGC57170	FGC57172, FGC57174
FGC57173	FGC57175
Z2293	Z2292
Z642	CTS5799, CTS11754, Z2299
FGC30542	FGC30547
FGC30543	FGC30548
Z2285	Z2278, CTS8258, Z2270, Z2267, Z27747, Z2266, Z2271, Z2274
Z2272	Z27746, CTS6792, Z2288, Z2275, Z2273, ZS1376, Z2276, Z2269, Y32091, Z2290, CTS757, Z2282, ZS1370
Z2289	Z27745, Z2284
FGC62702	FGC62703, FGC62704, FGC62705, FGC62707, FGC62709, FGC62710, FGC62711, FGC62713, FGC62714, FGC62715, FGC62716, FGC62719, FGC62721, FGC62722, FGC62724, FGC62725
FGC62618	FGC62621
Z27721	Z27726, Z27727, Z27731, Z27736, Z27737, FGC62751
FGC30546	FGC30549, FGC30550, FGC30551, FGC30552, FGC30553, FGC30554, FGC30558, FGC30560, FGC30561, FGC30562, FGC30563, FGC30565
FGC54385	FGC54386, FGC54389, FGC54391, FGC54393, FGC54394, FGC54395, FGC54396, FGC54397, FGC54398, FGC54401, FGC54403, FGC54404, FGC54409
BY74	Z18180
ZS1342	L174.1, FGC52766, ZS1325, ZS1326, ZS1332, ZS1335, ZS1343, ZS7611
ZS1409	ZS7415, ZS1420, ZS7425, Y36264, Y36969, ZS1411, ZS1418, ZS1422, ZS1416

Supplementary Table 4. SNPs and their Equivalents



Supplementary figure 1: NGS Testing Statistics