

Repping et al. **Supplementary Table 1** Summary of samples and experimental results.

Haplotype ^a	ID	# of signals for FISH probes ^b							Organization of green (G) and yellow (Y) dots ^b	Organization of green (G) and red (R) dots ^b	AZFc architecture ^d	IR3/IR3 orientation	Heterochromatin length ^e	Heterochromatin length sd	Pericentric inversion?	num. units in TSPY array	STS negatives
		RP11-217J19 (AZFa)	RP11-1325K3 (P5/P1) ^c	cosmid 18E8 (red, P5/P1 and AZFc)	RP11-363G6 (green, AZFc)	RP11-79J10 (yellow, AZFc)											
A2	GM03043	1	1	3	4	3	G-G-Y-G-Y-G-Y	G-R-G-R-G-R-G	c38	ref	50	1.9	no	34			
A3b1	YCC038	1	1	2	4	2	G-Y-G-G-Y-G	G-R-G-R-G-G	other dup. ^f	inv	47	2.6	no	29	sY1258		
A3b2*(xA3b2b)	4566†	1		2	3	2	G-Y-G-G-Y	G-R-G-R-G		ref	36	2.1	no	35			
A3b2b	GM06342	1	1	3	5	3	G-G-Y-G-G-Y-G-Y	G-R-G-G-R-G-R-G	c36	inv	38	2.5	no	31			
B2a1	PD061	1		2	3	2	G-G-Y-G-Y	G-R-G-R-G	c10	ref	37	2.6	no	37			
B2b	GM10470	1		2	3	2	G-G-Y-G-Y	G-R-G-R-G	c10	inv	43	2.7	no	35			
C	WHT3552	1		2	3	2	G-G-Y-G-Y	G-R-G-R-G	c10	ref	37	2.8	no	38			
D2b	PD178	1		1	2	1	G-G-Y	G-R-G	c8	ref	44	2.0	no	32	sY1291		
E*(xE2,E3ab)	PD339	1		2	3	2	G-Y-G-G-Y	G-R-G-R-G	ctr P3 del. ^g	inv	48	2.6	no	26	sY1197		
E2b	YCC037	1		2	3	2	G-Y-G-G-Y	G-R-G-R-G		ref	40	2.1	no	39			
E3a*(xE3a1)	GM02090	1		2	3	2	G-Y-G-G-Y	G-R-G-R-G		inv	41	2.1	no	35			
E3a1	PD399	1		2	3	2	G-Y-G-G-Y	G-R-G-R-G		inv	44	3.1	no	34			
E3b*(xE3b1,E3b3)	PD123	1		2	3	2	G-Y-G-G-Y	G-R-G-R-G		inv	54	2.6	no	36			
E3b1	PD111	1		2	3	2	G-Y-G-G-Y	G-R-G-R-G		ref	44	2.5	no	34			
E3b2	WHT3159	1		2	3	2	G-G-Y-G-Y	G-R-G-R-G	c10	ref	51	2.3	no	29			
E3b3	WHT3027	1		2	3	2	G-Y-G-G-Y	G-R-G-R-G		ref	40	1.7	no	31			
F*(xHK)	WHT2611	1		2	3	2	G-G-Y-G-Y	G-R-G-R-G	c10	ref	49	2.4	no	37			
H/-M69(x/-M52)	PD276	1		2	3	2	G-Y-G-G-Y	G-R-G-R-G		ref	50	2.3	no	41			
H*(xH1)	PD073	1		2	3	2	G-Y-G-G-Y	R-G-G-R-G	c7	ref	47	2.8	no	32			
H1	PD146	1		2	3	2	G-Y-G-G-Y	G-R-G-R-G		ref	40	3.5	no	33			
I	WHT3449	1		2	3	2	G-Y-G-G-Y	G-R-G-R-G		inv	43	3.5	no	27			
J*(xJ2)	WHT3635	1		2	3	2	G-G-Y-G-Y	G-R-G-R-G	c10	ref	42	2.4	no	34			
J2*(xJ2ef)	WHT3255	1		2	3	2	G-Y-G-G-Y	G-R-G-R-G		ref	38	3.6	no	28			
J2e	PD388	1	1	4	6	4	ND ^h	ND ^h	c6	inv	47	3.4	no	32			
J2f*(xJ2f1)	PD437	1		2	3	2	G-Y-G-G-Y	G-R-G-R-G		inv	48	1.8	no	32			
J2f1	WHT2426	1	1	3	5	3	ND ^h	G-R-G-G-R-G-R-G	other dup. ⁱ	inv	49	2.2	no	42			
K2	WHT3257	1		2	3	2	G-Y-G-G-Y	G-R-G-R-G		inv	44	2.3	no	35			
L*	WHT3299	1		2	3	2	G-Y-G-G-Y	G-R-G-R-G		ref	29 ^j	3.4	no	32			
L1	PD116	1		2	3	2	G-G-Y-G-Y	G-R-G-R-G	c10	ref	45	2.4	no	33			
M	GM10541	1		2	3	2	G-Y-G-G-Y	G-R-G-R-G		ref	44	3.3	no	64			
N*(xN3)	PD321	1		1	1	1	G-Y	G-R	c35	inv	47	2.4	no	26	sY1191		
N3	PD427	1		1	1	1	G-Y	G-R	c35	ref	44	1.7	no	23	sY1191		
O*(xO1,O2ab,O3)	PD016	1		2	3	2	G-Y-G-G-Y	R-G-G-R-G	c7	ref	49	1.7	no	31			
O1*(xO1b)	PD189	1		2	3	2	G-Y-G-G-Y	G-R-G-R-G		inv	51	1.4	no	33			

Repping et al. **Supplementary Table 1** Summary of samples and experimental results.

Haplotype ^a	ID	# of signals for FISH probes ^b						Organization of green (G) and yellow (Y) dots ^b	Organization of green (G) and red (R) dots ^b	AZFc architecture ^d	IR3/IR3 orientation	Heterochromatin length ^e	Heterochromatin length sd	Pericentric inversion?	num. units in TSPY array	STS negatives
		RP11-217J19 (AZFa)	RP11-1325K3 (P5/P1) ^c	cosmid 18E8 (red, P5/P1 and AZFc)	RP11-363G6 (green, AZFc)	RP11-79J10 (yellow, AZFc)										
O1b	PD274	1		2	3	2	G-Y-G-G-Y	G-R-G-R-G		inv	51	2.5	no	31		
O2a	PD143	1		2	3	2	G-Y-G-G-Y	G-R-G-R-G		ref	37	2.4	no	41		
O2b	PD197	1		2	3	2	G-Y-G-G-Y	G-R-G-R-G		ref	45	2.6	no	30		
O3*(xO3e)	PD264	1		2	3	2	G-Y-G-G-Y	R-G-G-R-G	c7	ref	37	1.9	no	34		
O3e*	PD131	1		2	3	2	G-Y-G-G-Y	G-R-G-R-G		ref	43	2.4	no	32		
O3e1	PD170	1		2	3	2	G-Y-G-G-Y	G-R-G-R-G		ref	48	2.6	no	34		
P*(xQ3,R)	PD421	1		2	3	2	G-Y-G-G-Y	G-R-G-R-G		ref	45	2.4	no	30		
Q3	PD024	1		1	1	1	G-Y	G-R	c35	ref	42	2.4	no	29	sY1191	
R1*(xR1a,R1b3f,-USP9Y+3636)	GM02294	1		2	3	2	G-Y-G-G-Y	G-R-G-R-G		ref	38	3.7	no	29		
R1a	WHT3242	1		2	3	2	G-Y-G-G-Y	G-R-G-R-G		ref	40	2.8	no	28		
R1b3f	PD217	1		2	3	2	G-Y-G-G-Y	G-R-G-R-G		ref	44	1.8	no	28		
R1/-USP9Y+3636	WHT2630	1		2	3	2	G-Y-G-G-Y	G-R-G-R-G		ref	41	2.1	no	28		
R2	PD306	1		2	3	2	G-Y-G-G-Y	G-R-G-R-G		inv	46	2.8	no	31		

Notes:

^a See The Y Chromosome Consortium, *Genome Res.* 12, 339-348 (2002) and Jobling and Tyler-Smith, *Nat. Rev. Genet.* 4, 598-612 (2003).

^b See main text Figure 4, Supplementary Table 2, Supplementary Figure 2, and Supplementary Methods.

^c Tested only if results at AZFc indicated a possible P5/P1 duplication, because such duplications, even occurring on chromosomes with partial deletions of AZFc, would have non-reference FISH results for AZFc.

^d Blank indicates reference AZFc architecture; other AZFc architectures are enumerated in Supplementary Table 2 and Supplementary Figure 2.

^e Measured as a percentage of length of entire metaphase chromosome.

^f The duplication in YCC038 extends proximally from AZFc for < 0.8 Mb (Supplementary Fig. 4).

^g See Supplementary Figure 3.

^h Unable to consistently resolve order of signals.

ⁱ WHT2426 has three FISH signals arising from the gray amplicons in AZFc, which, in conjunction with the other FISH results, does not correspond to a predicted AZFc architecture (main text Fig. 4f, Supplementary Fig. 2, Supplementary Methods).

^j See Methods in main text.

†Sample from The National Laboratory of the Genetics of Israeli Populations at Tel-Aviv University.