

Figure S1

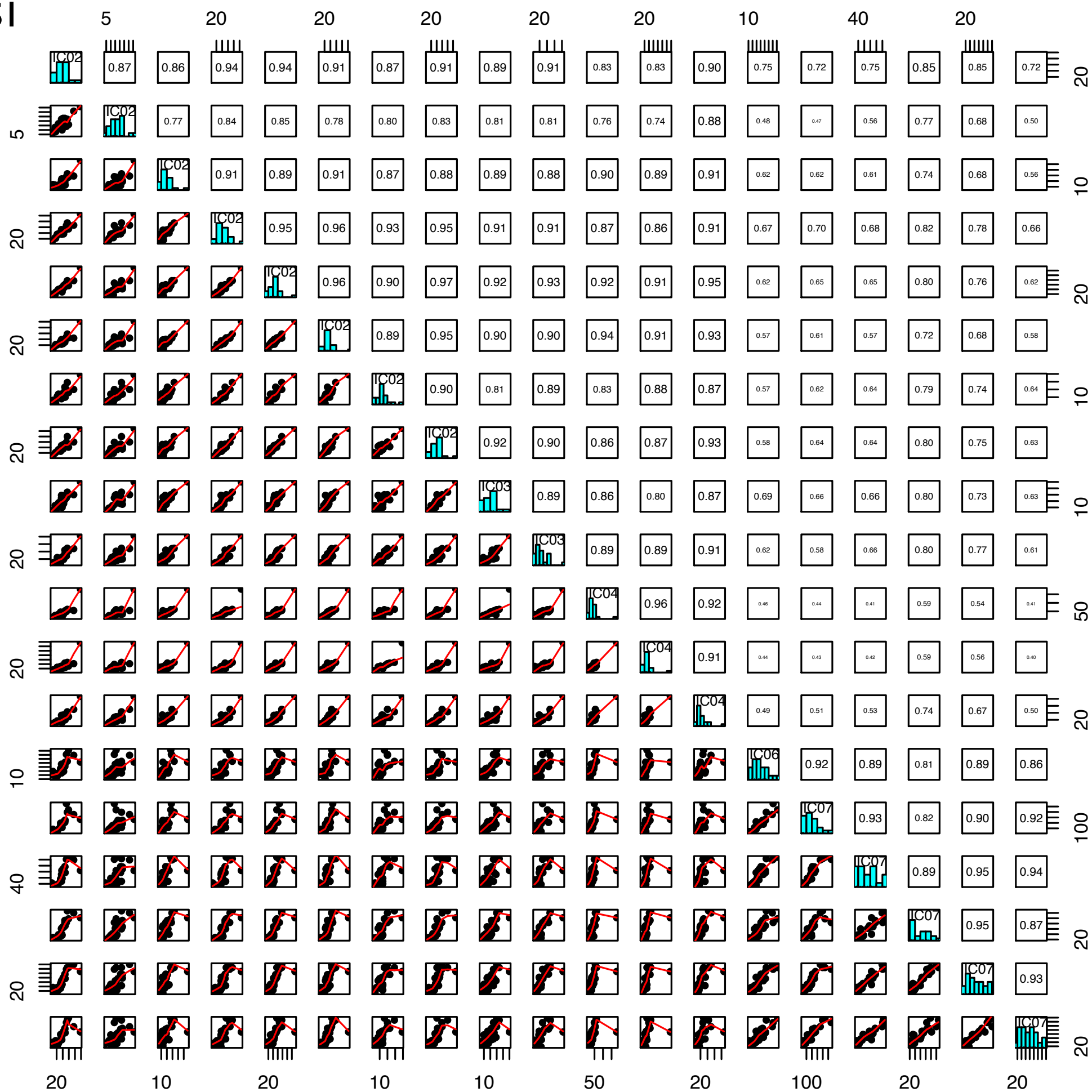
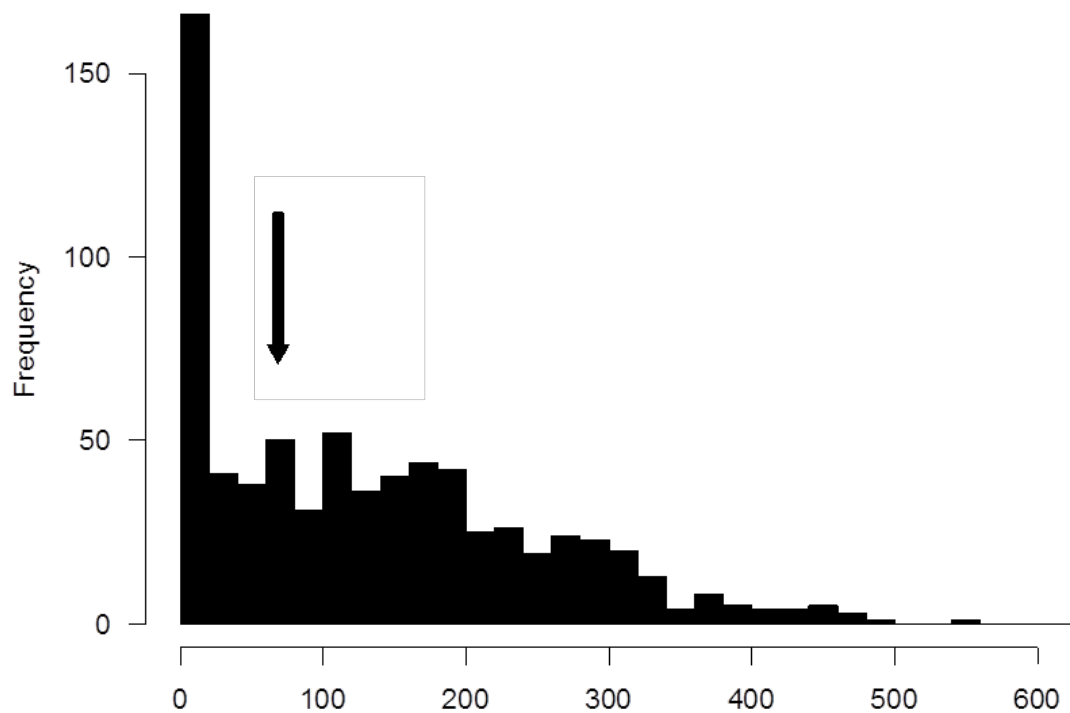


Figure S3

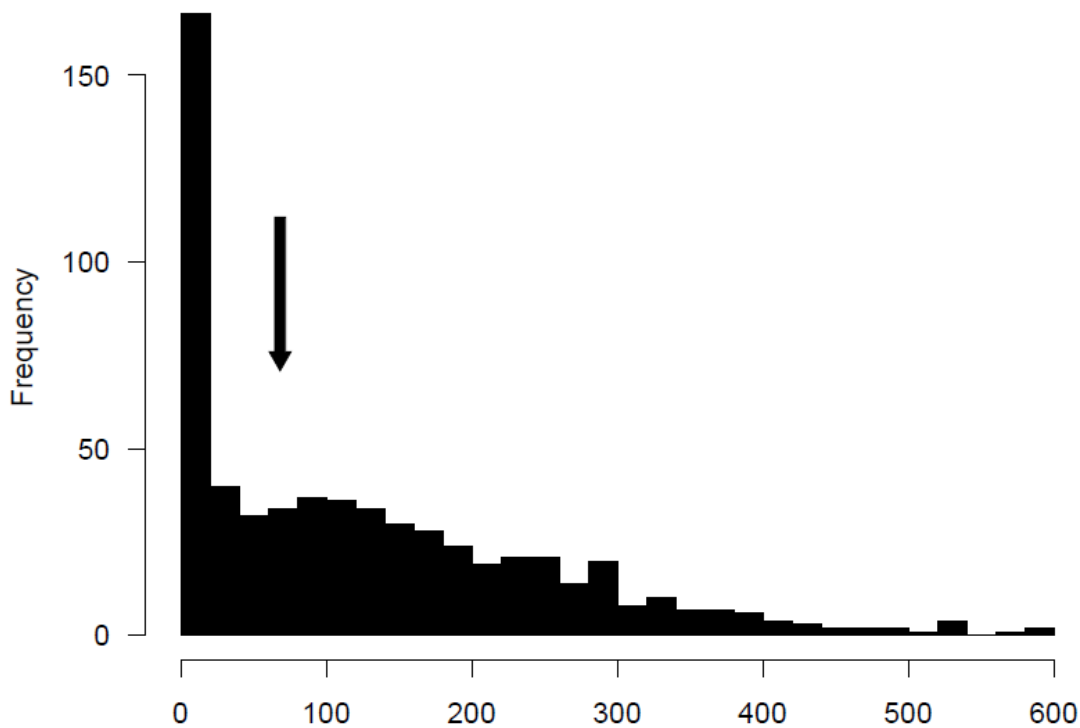
a

Randomization results for 1q42 region



b

Randomization results for chromosome 1



Supplementary Table 1. Copy number of 5S rDNA and adjacent Alu element in four human genome assemblies. CN denotes copy number in the segment.

Assembly	5S CN	Alu CN
GRCh37	16	18
HuRef	5	7
CHM1_1.1	4	6
CHM1tert (25255)	1	3
CHM1tert (25256)	8	9
CHM1tert (25257)	6	6

Supplementary Table 2. Number of Hi-C reads mapping to the repeat masked 5S rDNA repeat unit (2121bp) in each dataset. Shown are the number of reads for which both ends map to the 5S repeat unit and the number of reads for which one end maps to the 5S rDNA repeat unit and the other maps to the rest of the genome [whole genome (WG)]. Both the 5S rDNA unit and the whole genome were masked for repetitive elements.

Datasets	SRR number	Both ends mapped to the 5S rDNA unit	Number of reads mapped to the WG	Total number of mapped reads
HIC020	SRR1658592	80	2833	3405
HIC021	SRR1658593	14	1213	1512
HIC024	SRR1658598	49	1433	1913
HIC025	SRR1658599	26	2464	2833
HIC026	SRR1658600	40	2819	3349
HIC027	SRR1658601	25	2013	2442
HIC028	SRR1658602	25	1188	1489
HIC029	SRR1658603	97	2890	3586
HIC038	SRR1658644	179	1937	2588
HIC039	SRR1658645	379	3368	4643
HIC040	SRR1658646	421	4411	6182
HIC041	SRR1658647	253	3046	4191
HIC042	SRR1658648	211	2560	3733
HIC069	SRR1658693	219	4148	5288
HIC070	SRR1658694	1303	19657	26355
HIC071	SRR1658695	237	4928	6242
HIC072	SRR1658697	84	2383	2715
HIC073	SRR1658699	105	2663	3089
HIC074	SRR1658701	112	3244	4002
Sum		3859	69198	89557

Supplementary Table 3. Number of Hi-C reads mapping to the repeat masked 45S rDNA repeat unit (45,337 bp) in each dataset. Shown are the number of reads for which both ends map to the 45S rDNA repeat unit and the number of reads for which one end maps to the 45S rDNA repeat unit and the other maps to the rest of the genome [whole genome (WG)]. Both the 45S rDNA unit and the whole genome were masked for repetitive elements.

Datasets	SRR number	Both ends mapped to the 45S rDNA unit	Number of reads mapped to the WG	Total number of mapped reads
HIC020	SRR1658592	123249	447018	792852
HIC021	SRR1658593	36271	133667	266642
HIC024	SRR1658598	41400	143169	277034
HIC025	SRR1658599	78738	453930	766455
HIC026	SRR1658600	79754	464742	787493
HIC027	SRR1658601	74818	361846	648994
HIC028	SRR1658602	25259	120077	207967
HIC029	SRR1658603	57529	283331	498297
HIC038	SRR1658644	61629	142514	264786
HIC039	SRR1658645	86276	189732	382172
HIC040	SRR1658646	77265	197413	422356
HIC041	SRR1658647	53207	141085	296548
HIC042	SRR1658648	74238	180581	381876
HIC069	SRR1658693	39821	121685	251368
HIC070	SRR1658694	152853	414490	809402
HIC071	SRR1658695	18320	147131	218833
HIC072	SRR1658697	8330	82189	110106
HIC073	SRR1658699	9077	81039	110891
HIC074	SRR1658701	16607	133877	197463
Sum		1114641	4239516	7691535