

Table S1. Mapping positions, genomic properties and replication timing of all large-insert clones used as FISH probes in this study, either as pools as indicated in A-E, as subsets thereof or as individual probes. The large-insert clone ID refers to the abbreviation used throughout the text. The mapping position was derived from the NCBI 36 assembly (www.ensembl.org). ^{a)} The replication timing was previously determined by array-CGH (Woodfine et al., 2004). Each clone was assigned to an isochores according to the previously published isochores map of the human genome (Costantini et al., 2006). Isochores ^{b)} are DNA segments with an internal variation in ^{c)} %GC content below the full variation of the GC content in the entire human genome, ^{d)} The local gene density was determined based on the available information on 'known genes' (NCBI 36 assembly; www.ensembl.org) for a 2 Mb window, 1 Mb upstream and 1 Mb downstream of the center of each clone.

(A) Chromosome 1-22 and X large-insert clone pools representing early-replicating (green) and late-replicating (red) loci, each one clone per chromosome, if available

Clone ID	1 Mb array ID	Clone name	Chr.	Position (bp)	Clone length (bp)	Replication timing ^{a)}	Isochores position (Mbp) ^{b)}	% GC in isochores ^{c)}	Genes ± 1 Mbp ^{d)}
1e	dJ144C9	RP1-144C9	1	27575323-27652644	77322	2.03	24.9-28.3	48.1	65
1l	bA552K17	RP11-552K17	1	194520170-194617850	97681	1.03	194.5-194.9	38.40	11
2-1e	bA83M8	RP11-83M8	2	10189946-10392995	203050	1.97	10.1-11.2	48.7	34
2-3l	bA458O14	RP11-458O14	2	79819775-79920395	100621	1.04	78.9-80.9	38.60	13
3e	bA78O10	RP11-78O10	3	49843917-49994333	150417	2.04	49-50.1	49.1	74
3l	bA90M7	RP11-90M7	3	164366661-164516629	149969	1.05	162.8-169.2	35.1	1
4e	bA572O17	RP11-572O17	4	1595351-1782573	187223	1.96	0.5-4.3	51.9	52
4l	bA347K3	RP11-347K3	4	189700508-189778943	78436	0.98	189.6-190.7	38.8	11
5-4l	bA170P5	RP11-170P5	5	165677723-165841050	163328	1.06	165.6-166.7	38.1	4
6e	dJ34F7	RP1-34F7	6	32031967-32200774	168808	1.99	31.6-32.3	51.9	109
6l	bA21G12	RP11-21G12	6	93190239-93225251	35013	1.09	92.1-97.2	35.1	6
7-3e	bA450O3	RP11-450O3	7	72073705-72269192	195488	1.94	71.7-73.5	49.9	48

7l	bA343J14	bA343J14	7	78310705-78485567	174863	1.05	77.7-79.4	35.8	8
8e	bA446E9	RP11-446E9	8	57012703-57129759	117057	1.92	56.9-57.7	41.3	22
8l	bA75P13	RP11-75P13	8	34287721-34455078	167358	1.05	33.8-37.1	38.2	12
9e	bA570D4	RP11-570D4	9	113691272-113781581	90310	1.92	113.5-113.8	42.9	26
9l	bA264J11	RP11-264J11	9	28670842-28755649	84808	1.05	28.2-31.9	35.20	1
10e	bA122K13	RP11-122K13	10	134955982-135072292	116311	1.92	133.8-135.1	56.5	38
10l	bA428N21	RP11-428N21	10	68138624-68290770	152147	1.02	65.7-68.9	35.7	6
11e	bA231P15	RP11-231P15	11	62241256-62406841	165586	1.92	61.9-62.6	49.0	79
11l	bA324K6	RP11-324K6	11	37673711-37779927	106217	1.07	37-39.3	35.4	0
12e	bA474N8	RP11-474N8	12	55578149-55750146	171998	2.01	55.6-56.6	48.3	98
12l	bA268A19	RP11-268A19	12	80263369-80282240	18872	1.11	79.1-81.5	35.5	13
13l	bA275J18	RP11-275J18	13	88476233-88642741	166509	1.09	80.2-90.1	34.6	4
14e	bA463C8	RP11-463C8	14	76653300-76831630	178331	1.93	76.3-76.9	49.0	34
14l	bA168D12	RP11-168D12	14	41353854-41500293	146440	0.99	39.5-43.9	34.7	1
15e	bA414J4	RP11-414J4	15	72768830-72953361	184532	2.00	72.5-73.9	48.9	58
15l	bA215J7	RP11-215J7	15	52652476-52815253	162778	1.12	52.2-52.8	35.9	15
16e	bA2C24	RP11-2C24	16	30539890-30747839	207950	1.93	26.9-30.8	49	101
16l	bA467L24	RP11-467L24	16	62921648-63071733	150086	1.05	61.8-63.2	36.2	1
17-5e	bA141D15	RP11-141D15	17	73636218-73813841	177624	2.11	73.6-74	54.0	47
18e	bA61J14	RP11-61J14	18	54567090-54747580	180491	2.03	52.8-55.8	43.1	21
18l	bA25O3	RP11-25O3	18	47958320-48119508	161189	1.05	47.1-48.6	38.70	6
19e	bA521I20	RP11-521I20	19	54525652-54718270	192619	2.15	53.3-55.2	52.3	114
20e	bB152O15	RP13-152O15	20	62108686-62284676	175991	2.38	59.6-62.5	55.0	54
21e	bA113F1	RP11-113F1	21	42507308-42689289	181982	1.98	41.4-43.5	49.0	36
21l	bA509A1	RP11-509A1	21	21128294-21149667	21374	1.09	18.4-25.6	35.10	5

22e	dJ76B20	RP1-76B20	22	28379384-28551065	171682	1.95	27.7-29.9	48.0	83
Xe	bA54I20	RP11-54I20	X	152359266-152538562	179297	1.98	152.2-152.8	55.8	76
Xl	dA22P16	RP6-22P16	X	66474359-66577725	103367	1.07	66.3-66.5	36.7	6

(B) Chromosome-2-specific large-insert clone pools representing early-replicating (green) and late-replicating (red) loci

Clone ID	1 Mb array ID	Clone name	Chr.	Position (bp)	Clone length (bp)	Replication timing ^{a)}	Isochore position (Mbp) ^{b)}	% GC in isochore ^{c)}	Genes \pm 1 Mbp ^{d)}
2-1e	bA83M8	RP11-83M8	2	10189946-10392995	203050	1.97	10.1-11.2	48.7	34
2-2l	bA419E14	RP11-419E14	2	78739646-78927111	187466	1.12	76.1-78.9	35.30	12
2-3l	bA458O14	RP11-458O14	2	79819775-79920395	100621	1.04	78.9-80.9	38.60	13
2-4e	bA139J6	RP11-139J6	2	96130286-96151127	20842	2.00	96.1-97.1	49	47
2-5l	bA339P1	RP11-339P1	2	116380901-116514763	133863	1.08	115.3-118.1	36.60	13
2-6l	bA272E3	RP11-272E3	2	165238465-165429463	190999	1.11	162.9-166.3	36.00	12
2-7e	bA419H23	RP11-419H23	2	231787899-231964428	176530	2.02	231.7-232	42.9	40

(C) Chromosome-5-specific large-insert clone pools representing late-replicating (red) loci

Clone ID	1 Mb array ID	Clone name	Chr.	Position (bp)	Clone length (bp)	Replication timing ^{a)}	Isochore position (Mbp) ^{b)}	% GC in isochore ^{c)}	Genes \pm 1 Mbp ^{d)}
5-1l	bA192H6	RP11-192H6	5	25187395-25333181	145787	1.10	23.2-31.6	35.30	4
5-2l	bA153B10	RP11-153B10	5	113303877-113366022	62146	1.13	113.1-114.4	38.00	7
5-3l	bA11P11	RP11-11P11	5	121061464-121226480	165017	1.13	119.2-121.4	35.50	11
5-4l	bA170P5	RP11-170P5	5	165677723-165841050	163328	1.06	165.6-166.7	38.10	4

(D) Chromosome-7-specific large-insert clone pools representing early-replicating (green) and late-replicating (red) loci

Clone ID	1 Mb array ID	Clone name	Chr.	Position (bp)	Clone length (bp)	Replication timing ^{a)}	Isochore position (Mbp) ^{b)}	% GC in isochore ^{c)}	Genes \pm 1 Mbp ^{d)}
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7-1e	bA106E3	RP11-106E3	7	2607390-2657138	49749	2.00	2.5-3.1	47.8	22
7-2l	bA512E16	RP11-512E16	7	14128072-14279388	151317	1.11	12.7-16.1	35.60	3
7-3e	bA450O3	RP11-450O3	7	72073705-72269192	195488	1.94	71.7-73.5	49.9	48
7-4l	dJ1057M1	RP5-1057M1	7	79539131-79644969	105839	1.06	79.4-80.2	36.40	8
7-5l	bA242J14	RP11-242J14	7	83230804-83414012	183209	1.11	80.5-86	35.00	6
7-6l	dJ558L10	RP4-558L10	7	145959491-146102540	143050	1.11	144.1-146.6	36.10	3

(E) Chromosome-17-specific large-insert clone pools representing early-replicating (green) loci

Clone ID	1 Mb array ID	Clone name	Chr.	Position (bp)	Clone length (bp)	Replication timing ^{a)}	Isochore position (Mbp) ^{b)}	% GC in isochore ^{c)}	Genes \pm 1 Mbp ^{d)}
17-1e	bA216P6	RP11-216P6	17	800495-1008155	207661	1.91	0.8-1.1	54.1	48
17-2e	bA524F11	RP11-524F11	17	17338138-17521471	183334	1.98	17.3-17.7	53.9	62
17-3e	bA189D22	RP11-189D22	17	17942719-18110985	168267	2.10	17.9-18.1	53.3	67
17-4e	bK58E17	Cancer3C7	17	33964845-34251503	286659	1.97	33.8-34.2	53.1	50
17-5e	bA58O9	RP11-58O9	17	35754712-35920945	166234	1.96	35-36	49.2	95
17-6e	bA141D15	RP11-141D15	17	73636218-73813841	177624	2.11	73.6-74	54	47
17-7e	bA567O16	RP11-567O16	17	78311474-78374827	63354	1.99	76.4-78.8	55.8	52