

## **Supplementary Methods**

### **Study Participants and Samples**

Samples were obtained from 5 individuals enrolled in studies of HIV infections in protocols 97-I-0082 and 08-I-0221 approved by the intramural NIAID Institutional Review Board, FWA00005897, and conducted at the NIH Clinical Center in Bethesda, Maryland (Table S1). Study participants underwent an informed consent process and provided written consent for research studies, including genetic testing. All patients initially underwent therapy with a 4 drug cART regimen consisting of an NRTI (AZT or D4T), 3TC, nevirapine, and indinavir, for at least 1 y. (4), (31). Subsequently, drug regimens were adjusted for ease of adherence, or as needed to provide effective suppression of viremia; the regimens at the last time the patients were sampled for this study are given in table S1. Plasma and cells were obtained during protocol visits by phlebotomy, cytopheresis, or both. With the exception of the last sample from patient 1, all DNA analyses were performed using bulk PBMCs. The last PBMC sample from patient 1 was subjected to negative selection using antibody coated beads (EasySep™ Human CD4+ T Cell Enrichment Kit, StemCell Technologies, Vancouver, BC, Canada) to remove B cells, CD8+ T cells, and monocytes before further analysis. Plasma viral RNA and PBMC viral DNA were analyzed using single genome sequencing (SGS) covering an 1100 bp region encoding the end of Gag, Pro, and approximately the first 220 amino acids of RT, as described (4, 32). At the time of sampling for two of the integration site assays, low level viremia was detected in two patients (table S1). For patient 3, low level viremia (828 copies/ml plasma) was detected after 10-14 days of a treatment interruption due to intercurrent illness. A second participant, patient 1,

developed persistent low-level viremia consisting of a mixture of drug-resistant and drug-sensitive virus (fig. S1). Concomitant with the rebound, the patient was diagnosed with lingual squamous cell cancer. In preparation for chemotherapy, the cART regimen was changed to a combination that was active against the resistant virus, resulting in a decrease in viremia, but plasma HIV RNA remained above 50 copies/ml. SGS analysis of the persistent HIV RNA showed that the drug resistant virus had been eliminated, but the WT virus persisted.

### **Integration Site Analysis.**

DNA was isolated from ficoll purified PBMC (5-10 x 10<sup>6</sup>) or negatively-selected CD4<sup>+</sup> T cells obtained by cytopheresis (50 x 10<sup>6</sup> cells were processed using an EasySep™ Human CD4<sup>+</sup> T Cell Enrichment Kit, StemCell Technologies, Vancouver, BC, Canada). DNA from 1.5 million cells (9 ug) was sheared into 300 bp-500 bp random fragments using Covaris Adaptive Focused Acoustics (Covaris, Woburn, MA). The sheared DNA fragments were end-repaired using the End-it DNA End Repair kit (Epicentre, Madison, WI) and a single dA was added to the 3' ends using a dA-tailing kit (NEB, Ipswich, MA). A partially double stranded linker (5'-GTAATACGACTCACTATAGGGCTCCGCTTAAGGGACT3', 5'-PO4-GTCCCTTAAGCGGAG-3'-C6) with a one nucleotide 3' T overhang was ligated to the genomic DNA fragments. The 3' dA overhang on the genomic DNA fragments and the 3' T overhang on the linker DNA prevented genomic-genomic DNA and linker-linker ligation, increased the efficiency of the desired ligation, and reduced the artifacts associated with cross-ligation commonly seen with restriction enzyme based linker-mediated PCR (LM-PCR). The integration junctions were selectively amplified using one

primer that matched the HIV LTR sequence and the other primer that matched the single stranded portion of the linker. Nested PCR was performed with an inner primer pair; one primer matched the sequence of the LTR and the other primer matched the linker (outer: HIV-3LTR, 5'TGTGACTCTGGTAACTAGAGATCCCTC3';

Inner: HIV-3LTRnest,

5'AATGATACGGCGACCACCGAGATCTACACTCTTCCCTACACGACGCTCTTC  
CGATCTNNNNNNCCCTTTTAGTCAGTGTGGAAAATC3'; outer: HIV-5LTR,

TCAGGGAAGTAGCCTTGTGTGTGGT; inner: HIV-5LTRnest,

5'AATGATACGGCGACCACCGAGATCTACACTCTTCCCTACACGACGCTCTTC  
CGATCTNNNNNNCACTGTTGTCTTTTCTGGGAGTGAAGTAGCC; outer: Linker-

P1, 5'GTAATACGACTCACTATAGGGC3'; inner: PE2\_Linkernest,

5'CAAGCAGAAGACGGCATACGAGATCGGTCTCGGCATTCCTGCTGAACCGCT  
CTTCCGATCTNNNNNNAGGGCTCCGCTTAAGGGAC3'; NNNNNN stands for

barcodes). This second PCR amplification increased the specificity of amplification and was used to introduce the Illumina sequencing adapters and barcodes. Primers specific for both the 3'LTR and 5'LTR were used in the same PCR reaction to increase the efficiency of the recovery of integration sites. Sequencing was carried out using a MiSeq 2 x 150bp paired end kit, or, in the case of the negatively selected CD4+ cell sample from patient 1, a HiSeq 2 x 105bp paired end kit (Illumina, San Diego, CA). Read1 sequences include the LTR-host DNA junction and read2 sequences include the broken end of the host DNA. DNA from a cell line carrying a single known HIV provirus was added to all of the patient samples to monitor the LM-PCR and sequencing reactions. Sequences were trimmed by custom Perl scripts and then mapped to human genome hg19 with

BLAT. Valid integration site junctions met the following criteria: 1) read1 contained the LTR primer and the last 5 bp of the LTR sequence, 2) followed by >20 bp DNA sequence with an average quality score  $Q > 20$  with a >95% match to genomic DNA starting within 3bp of the LTR junction, and 3) the paired end sequence (read2) that defined the sheared breakpoint matched the opposite strand in the human genome within 1kb of the sequence at the corresponding (read1) LTR junction. The use of paired-end sequences improved the mapping accuracy and made it possible to identify multiple copies of the same integration site. Two sequences that have the same integration site but different breakpoints in the host DNA must have come from different cells. Only breakpoints that were >3nt apart were counted as independent events to avoid any potential errors that might have arisen in determining the breakpoints.

Using this stringent filter to identify independent breakpoints avoids problems with misidentifying cells as clonally expanded that are not, but it also limits the number of independent breakpoints that can be counted, because, on average, the amplified host DNA segments are short (usually less than 200bp). Thus, the number of breakpoints will be underestimated if a clone is highly amplified; the greater the degree of clonal amplification, the more severe the undercount due to overlapping breakpoints. The fraction of the total integration sites in a large clone can be estimated more accurately based on the total number of times the integration site was sequenced. Although there is preferential amplification of certain breakpoints, and others are poorly amplified, this averages out if the number of breakpoints is large. The estimate of the size of the amplified clone is internally controlled by the added DNA from the cell line which has one well-defined HIV integration site. The amount of cell line DNA that was added is

known, and the estimate of the size of clonal expansion can be validated using the data from the added cell line DNA.

Some of the sequences could not be mapped to a unique site in the human genome because the integration sites were within repeated or unfinished regions of the human genome. To identify these integration sites, we reanalyzed the integration junction sequences using a different approach. We first trimmed off the linker and LTR sequences, then clustered all of the junction sequences using UCLUST (33). This program clusters sequences based on similarity, but the sequences that are being compared can vary in length. The proviruses from clonally expanded cells generated clusters of sequences that had the same viral/host junction but different lengths of host DNA, corresponding to different breakpoints in the host genome. Using this method, we confirmed the integration sites in all of the clonally expanded cells that were identified using our initial mapping strategy. We also found a few additional clusters that we failed to map using the initial approach. One cluster derives from one of the two most highly expanded clones in patient 1. Manual inspection of the junction sequences of this cluster showed that it had a 100% match to several regions that cannot be confidently placed on a specific chromosome in the human genome (hg19). Extensive searches through GENBANK and the latest human genome assembly (hg38) showed that this integration site had a 100% match to 5 different places, three of which are on chr21 within an rRNA gene. The provirus integrated at this site (called ambiguous in Fig. 2) was identified as the source of the identical virion RNA sequences in plasma by a comparison of their sequences following selective PCR amplification of a portion of the provirus with primers that matched pol and the flanking host sequence (see text and Fig. 1A). All

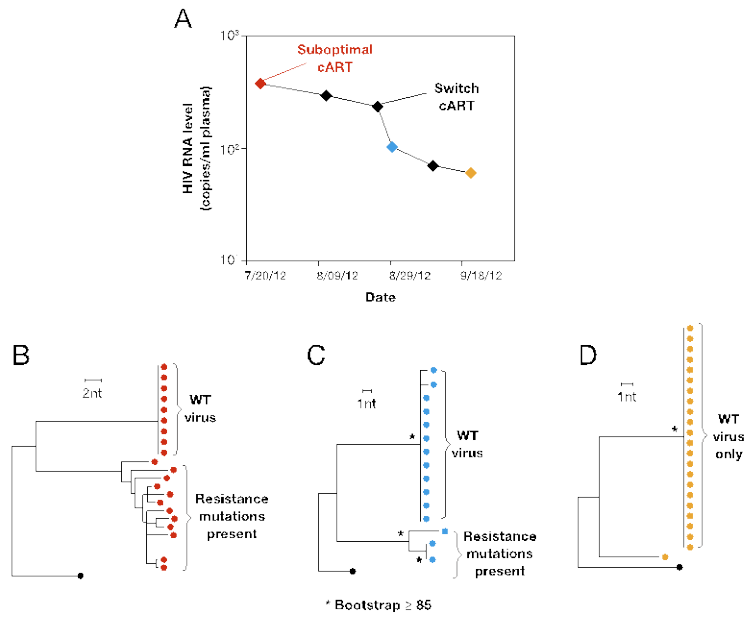
sequences have been deposited in NCBI sequence archives (under accession PRJNA241020).

### **Single-genome Sequencing and Analysis**

Viral RNA was extracted from plasma and was used to synthesize cDNA with a primer in pol. Genomic DNA (gDNA) was extracted directly from PBMCs. The cDNA or gDNA was end-point diluted, PCR amplified, and single-genome sequences from an 1100 bp region that encodes a segment from near the end of Gag through amino acid 220 of RT were obtained as previously described (4, 32). Sequences were aligned using Clustal W, G>A hypermutants were removed, and neighbor-joining trees were constructed in MEGA 6.0 with consensus B HIV as the outgroup. As expected, the intra-patient genetic diversity is relatively limited (<2% average pairwise difference) (34). Phylogenetic structure was tested by bootstrap analysis (500 replicates).

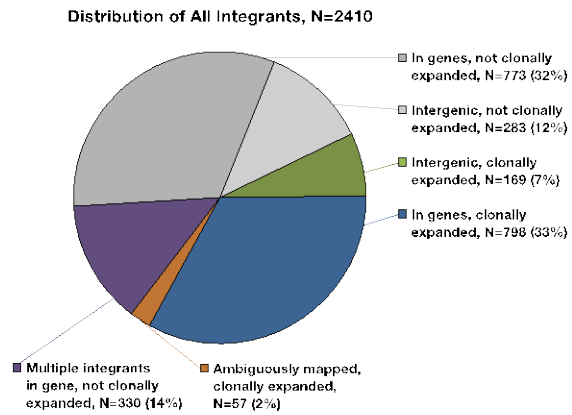
### **Functional Association Analysis**

To identify functional associations of the genes that had HIV integration sites, gene ontology (GO) analysis was performed using GREAT software with the default settings (35). This data mining software was used to analyze the genetic information associated with the HIV integration sites from all 5 patients (including clonally expanded sites). The goal was to identify functional associations of the genes. HIV preferentially integrates into expressed genes in gene-rich regions, and, for comparative purposes, we also analyzed the integration sites in the HeLa cell library, and in the human CD34+ cell library. Because the HeLa and human CD34+ cell libraries were large, the 2000 genes that were the top targets for HIV integration were used in the GREAT analysis.



**Figure S1.**

Longitudinal analysis of the plasma HIV RNA from patient 1. A. The graph shows plasma HIV RNA levels at various times starting after 11.4 years on therapy. The trees in B-D show the diversity of the plasma HIV RNA sequences obtained by SGS. The trees and the points on plasma HIV RNA graph are color coded to show which times correspond to which trees. The trees shown are from samples obtained before the switch to a cART regimen that was active against the drug-resistant viral variants (B), 7 days after the switch (C), and 21 days after (D).

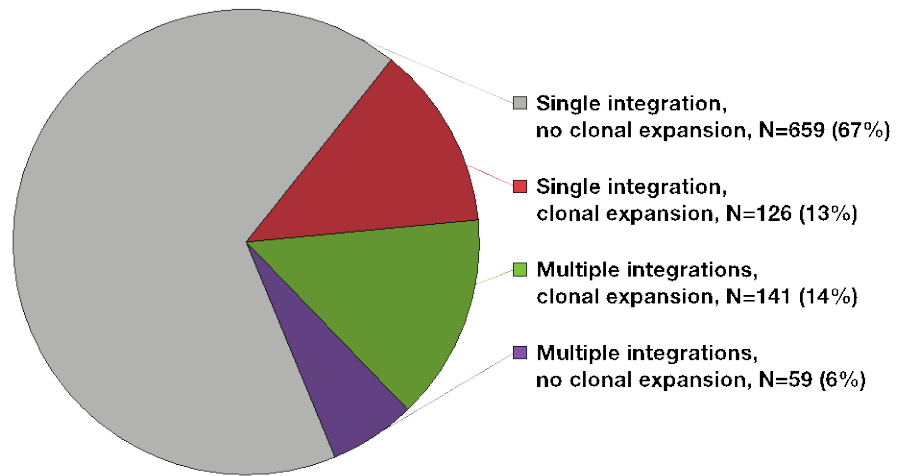


**Figure S2.**

HIV integration sites in all of the patients. The pie chart shows the distribution of the integration sites (N=2410) obtained from all of the time points from the 5 patients.



**Genes with Integrations, N=985**

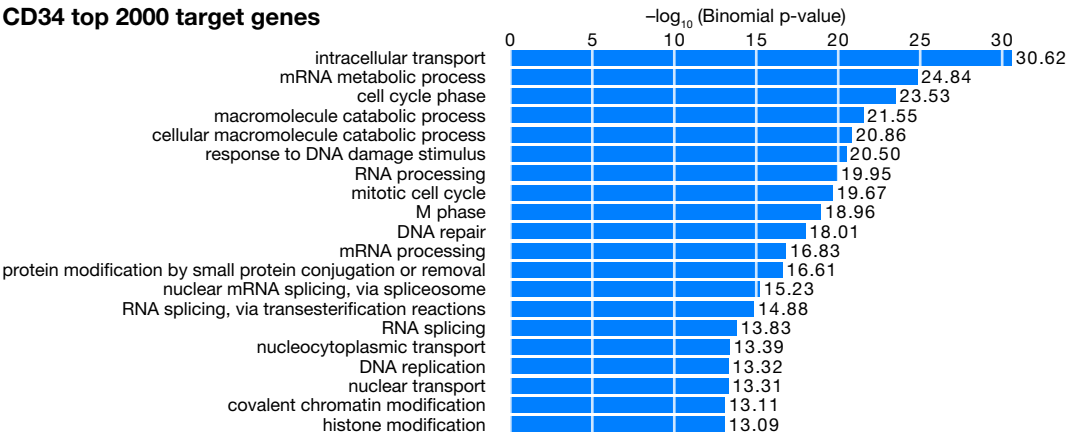


**Figure S3.**

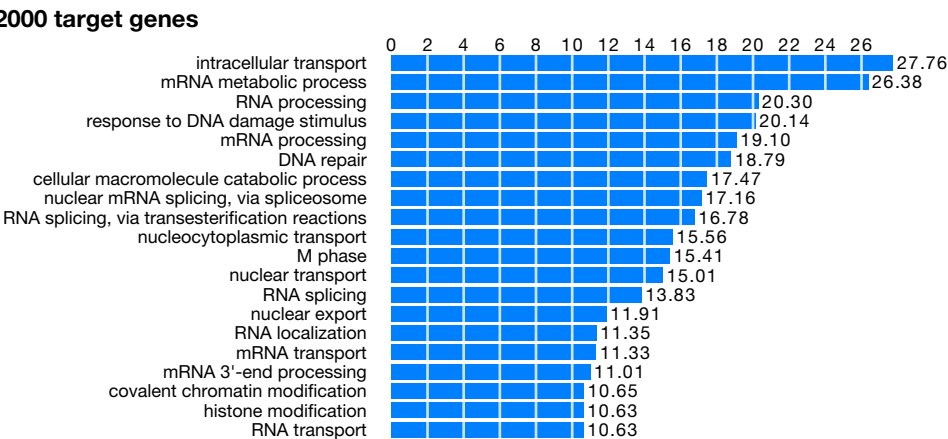
Integration sites in genes (N=985). The pie chart shows the distribution of the integration sites in genes, how many genes have multiple integration sites, and how many of the sites are in expanded cells.

GO Biological Process

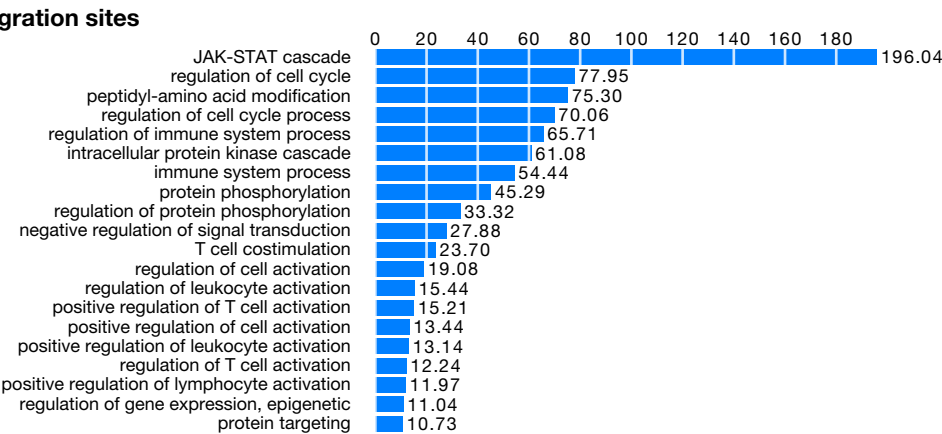
CD34 top 2000 target genes



HeLa top 2000 target genes



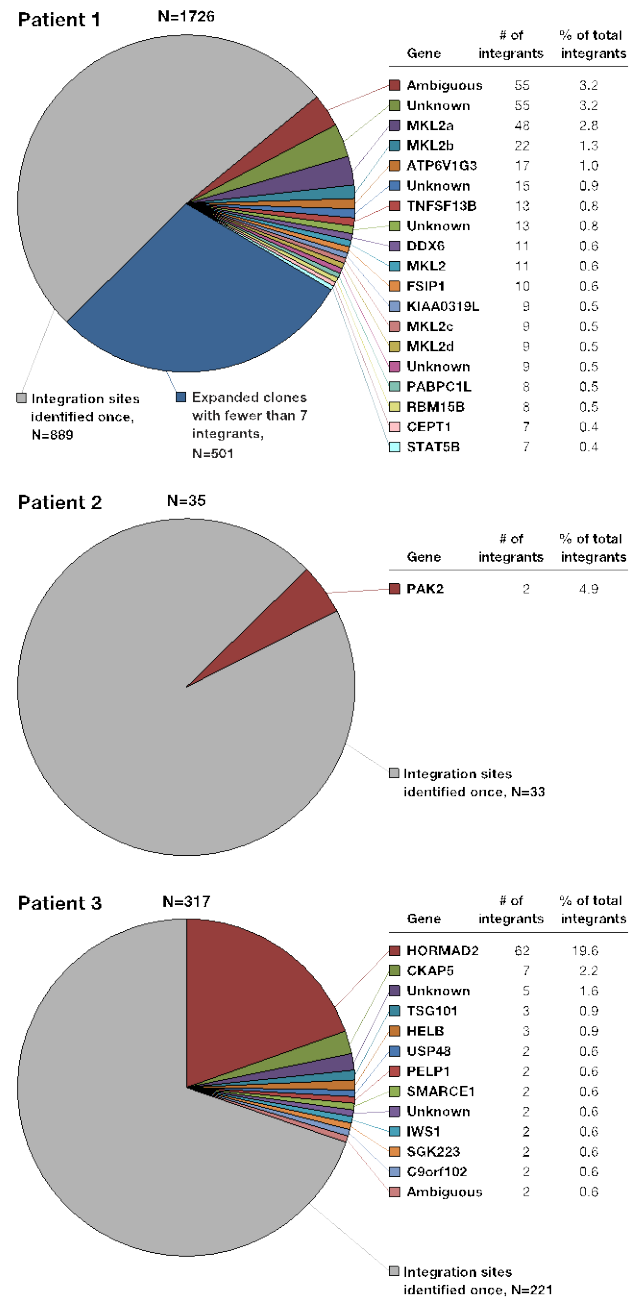
Patient integration sites



Disease Ontology

Patient integration sites





**Figure S5.**

HIV integration sites in the five individual patients. The pie charts show the distribution of the integration sites for each of the patients. The data in this figure is similar to the data presented in Figure 2, except that, in this figure, the data are presented for the individual patients. For patient 1, integration sites that were isolated at least 7 times are indicated. For the other 4 patients, from whom fewer integration sites were obtained, all of the integration sites from expanded clones are shown.

**Table S1.**  
Patient demographics.

<b>Patient</b>	<b>Age at entry (y)</b>	<b>Gender</b>	<b>Race/ Ethnicity</b>	<b>CD4+ before cART (cells/μl)</b>	<b>Initial HIV RNA (Log10 copies/ml plasma)</b>	<b>cART Duration (y)</b>	<b>HIV RNA at sampling (Log10 copies/ml plasma)</b>	<b>Current cART regimen</b>
<b>1*</b>	<b>46.5</b>	<b>M</b>	<b>Black</b>	<b>22</b>	<b>5.4</b>	<b>11.4</b>	<b>2.1</b>	<b>TDF+FTC +RTG</b>
<b>2</b>	<b>24.6</b>	<b>F</b>	<b>Black</b>	<b>243</b>	<b>3.9</b>	<b>12.9</b>	<b>&lt;1.7</b>	<b>TDF+FTC +NVP</b>
<b>3</b>	<b>51.6</b>	<b>M</b>	<b>Black</b>	<b>24</b>	<b>5.6</b>	<b>7.2</b>	<b>2.9</b>	<b>TDF+FTC+ ATZ/r</b>
<b>4</b>	<b>39.2</b>	<b>M</b>	<b>White</b>	<b>924</b>	<b>4.2</b>	<b>12.3</b>	<b>&lt;1.7</b>	<b>ABC+3TC +NVP</b>
<b>5</b>	<b>43.5</b>	<b>M</b>	<b>Black</b>	<b>17</b>	<b>5.4</b>	<b>14.5</b>	<b>&lt;1.7</b>	<b>TDF+FTC +NVP</b>

**\*deceased**

**Table S2.**

Overview of the integration sites in the five patients.

Patient	Years on therapy	Distinct integration sites	Integration sites that are singles	Percent of total sites that are singles	Unique sites undergoing expansion (integrations occurring more than once)	Percent of unique sites undergoing expansion	Total number of sites from expanded clones	Percent of total sites from expanded clones
1	0.2	220	189	65.9	31	14.1	98	34.1
	4.8	56	45	64.3	11	19.6	25	35.7
	11.4	848	685	50.0	163	19.2	684	50.0
2	12.9	35	33	95.1	1	2.9	2	5.7
3	0	46	44	95.7	1	2.2	2	4.3
	7.2	188	176	65.1	12	6.4	94	34.9
4	12.2	159	141	65.6	18	11.3	74	34.4
5	14.5	111	106	91.3	5	4.5	10	8.6

**Table S3.**

All of the integration sites obtained from the five patients studied.

Because it is large, this table was added to the pdf as an attachment.

**Table S4. Genes that have three or more different integration sites in the five patients studied.**

This table lists all of the genes in which we found more than three independent integration sites. In several cases there were integration sites in a particular gene in more than one patient; some of the integration sites were in clonally expanded cells.

Gene	Patients with integrants	Distinct intragenic integrations (N)	Total integration sites per gene (N)	Gene designation
BACH2	1,3	17	25	BTB and CNC homology 1, basic leucine zipper transcription factor 2
MKL2	1,4	16	122	MKL/myocardin-like protein 2 Transcriptional coactivator of serum response factor
STAT5B	1,3,4,5	10	18	Signal transducer and activator of transcription 5B
CYTH1	1,5	6	7	cytohesin 1
RPTOR	1,2,3,4	6	7	regulatory associated protein of MTOR, complex 1
TAOK1	1	5	8	TAO kinase 1
TNRC6B	1,5	5	7	trinucleotide repeat containing 6B
VPS45	1,3	4	5	vacuolar protein sorting 45 homolog (S. cerevisiae)
PRKCB	1,3	4	7	protein kinase C, beta
MKL1	1	4	9	Megakaryoblastic leukemia (translocation) 1 transcription interacting protein
MAP4	1	4	7	microtubule-associated protein 4
PAK2	1,2	4	10	p21 protein (Cdc42/Rac)-activated kinase 2
NSD1	1,5	4	7	Nuclear receptor binding SET domain protein 1
KIAA0319L	1	3	12	KIAA0319-like
SLC30A7	1,4	3	4	Homo sapiens solute carrier family 30 (zinc transporter), member 7
SHOC2	1	3	4	soc-2 suppressor of clear homolog (C. elegans)
NUMA1	1,3,4	3	4	nuclear mitotic apparatus protein 1
CDKN1B	1	3	4	cyclin-dependent kinase inhibitor 1B (p27, Kip1)
ARID2	1,4,5	3	4	AT rich interactive domain 2 (ARID, RFX-like)
NFATC3	1,4	3	7	Nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 3

**Table S4 (continued) Genes that have three or more different integration sites in the five patients studied.**

SMARCE1	3,5	3	4	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily e, member 1
EPS15L1	1,3	3	4	epidermal growth factor receptor pathway substrate 15-like 1
GATAD2A	1	3	4	GATA zinc finger domain containing 2A
HORMAD2	1,3	3	64	HORMA domain containing 2
ALG12	1	3	6	ALG12, alpha-1,6-mannosyltransferase
BTBD9	1	3	6	BTB (POZ) domain containing 9
OSBPL3	1	3	4	oxysterol binding protein-like 3
UBE2H	1,2	3	8	ubiquitin-conjugating enzyme E2H
FNBP1	1	3	5	formin binding protein 1



**Table S5. Genes with HIV integration sites in our patient dataset that have been reported previously (10, 14-17).**

Gene	Independent integration sites, current study (5) <sup>a</sup>	Percent of independent integration sites, current study	Independent integration sites, Ikeda et al. <sup>b</sup> (7) <sup>a</sup>	Percent of independent integration sites, Ikeda et al.	Independent integration sites			
					Han et al. <sup>b</sup> (16) <sup>a</sup>	Mack et al. <sup>b</sup> (4) <sup>a</sup>	Katano et al. <sup>b</sup> (1) <sup>a</sup>	Imamichi et al. <sup>b</sup> (1) <sup>a</sup>
BACH2	17	1.04	67	14.44		1		1
MKL2	16	0.98	4	0.86		1		
STAT5B	10	0.61	19	4.09				
RPTOR	6	0.37	2	0.43				
TNRC6C	6	0.37	1	0.22				
CYTH1	6	0.37	1	0.22				
TAOK1	5	0.31	2	0.43				
FKBP5	5	0.31	1	0.22	1			
KDM2A	5	0.31	1	0.22				
EIF4G3	4	0.25	3	0.65				
PRKCB	4	0.25	1	0.22				
UBE2G1	4	0.25	1	0.22				
STAT3	4	0.25					1	
GNB1	3	0.18	1	0.22				
SLC30A7	3	0.18	1	0.22				
CAPN1	3	0.18	1	0.22				
NUMA1	3	0.18	1	0.22				
CYLD	3	0.18	1	0.22				
CTCF	3	0.18	1	0.22				
PCM1	3	0.18	1	0.22				
FNBP1	3	0.18	1	0.22				
KIAA0319L	3	0.18			2	1		
NFATC3	3	0.18			1			
DNMT1	3	0.18			1			
BTBD9	3	0.18			1			
SMG1	2	0.12	9	1.94				
CBFB	2	0.12	3	0.65				
SAE1	2	0.12	2	0.43		1		
SPTAN1	2	0.12	2	0.43				
GRB2	2	0.12	1	0.22	1			
PRDM2	2	0.12	1	0.22				
CDC14A	2	0.12	1	0.22				
ASH1L	2	0.12	1	0.22				
NUP133	2	0.12	1	0.22				
ATF7IP	2	0.12	1	0.22				
MARS	2	0.12	1	0.22				

**Table S5 (continued) Genes with HIV integration sites in our patient dataset that have been reported previously**

CSNK1G1	2	0.12	1	0.22
POLR2A	2	0.12	1	0.22
DNAJC7	2	0.12	1	0.22
LPIN2	2	0.12	1	0.22
HNRNPM	2	0.12	1	0.22
AAK1	2	0.12	1	0.22
INPP4B	2	0.12	1	0.22
ZNRD1-AS1	2	0.12	1	0.22
ABCF1	2	0.12	1	0.22
TRAPPC9	2	0.12	1	0.22
HEATR7A	2	0.12	1	0.22
ARHGEF6	2	0.12	1	0.22
SF1	2	0.12		1
NCOR1	2	0.12		1
BRE	2	0.12		1
SSH2	2	0.12		1
SPATS2	1	0.06	4	0.86
UBAC2	1	0.06	2	0.43
TOP1	1	0.06	2	0.43
ANKRD11	1	0.06	1	0.22
UBE4B	1	0.06	1	0.22
CDC42	1	0.06	1	0.22
ARID1A	1	0.06	1	0.22
WASF2	1	0.06	1	0.22
PHACTR4	1	0.06	1	0.22
PUM1	1	0.06	1	0.22
NOTCH2NL	1	0.06	1	0.22
DENND1B	1	0.06	1	0.22
ADK	1	0.06	1	0.22
SLK	1	0.06	1	0.22
PRMT3	1	0.06	1	0.22
MARK2	1	0.06	1	0.22
KPNA3	1	0.06	1	0.22
SPG11	1	0.06	1	0.22
UBE2I	1	0.06	1	0.22
ANKFY1	1	0.06	1	0.22
VAV1	1	0.06	1	0.22
SLC44A2	1	0.06	1	0.22
RASAL3	1	0.06	1	0.22
ZNF708	1	0.06	1	0.22
SAMD4B	1	0.06	1	0.22
LOC100506012	1	0.06	1	0.22

**Table S5 (continued) Genes with HIV integration sites in our patient dataset that have been reported previously**

FARP2	1	0.06	1	0.22
RBM39	1	0.06	1	0.22
DIDO1	1	0.06	1	0.22
SFH1	1	0.06	1	0.22
APEH	1	0.06	1	0.22
ARAP2	1	0.06	1	0.22
UBE2D2	1	0.06	1	0.22
LOC100294145	1	0.06	1	0.22
UTRN	1	0.06	1	0.22
OGDH	1	0.06	1	0.22
COG5	1	0.06	1	0.22
JHDM1D	1	0.06	1	0.22
NCOA2	1	0.06	1	0.22
DDX26B	1	0.06	1	0.22
MECP2	1	0.06	1	0.22
DIP2B	1	0.06		1
TOP2A	1	0.06		1
ADNP	1	0.06		1
DLG1	1	0.06		1
FARS2	1	0.06		1
HBS1L	1	0.06		1
RUNX2	1	0.06		1

<sup>a</sup> the number in parenthesis is the number of patients involved in the study

<sup>b</sup> References: Ikeda et al (1); Han et al. (2); Mack et al. (3); Katano et al. (4) Imamichi et al. (5).

#### References

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2. Y. Han *et al.*, Resting CD4+ T cells from human immunodeficiency virus type 1 (HIV-1)-infected individuals carry integrated HIV-1 genomes within actively transcribed host genes. *Journal of virology* **78**, 6122 (Jun, 2004).
3. K. D. Mack *et al.*, HIV insertions within and proximal to host cell genes are a common finding in tissues containing high levels of HIV DNA and macrophage-associated p24 antigen expression. *Journal of acquired immune deficiency syndromes* **33**, 308 (Jul 1, 2003).
4. H. Katano *et al.*, Integration of HIV-1 caused STAT3-associated B cell lymphoma in an AIDS patient. *Microbes and infection / Institut Pasteur* **9**, 1581 (Nov-Dec, 2007).
5. H. Imamichi *et al.*, Lifespan of effector memory CD4+ T cells determined by replication-incompetent integrated HIV-1 provirus. *Aids*, (Jan 31, 2014).

Table S3.

All of the integration sites obtained from the five patients studied.

Sample (a)	Integration Site (b)				Breakpoint		Nearest Gene (c)					
	Location	LTR	Strand	Site	Distance	Intron/Exon/ Distance (d)	Reference ID	Name	Strand	TxStart	TxEnd	
PT1_Y11.4	chr1	1157598	3'	+	1157859	261	intron	NM_016547	SDF4	-	1152287	1167447
PT3_Y7.2	chr1	1549332	3'	-	1549182	150	1462	NM_001170688	MIB2	+	1550794	1565990
PT3_Y0	chr1	1735043	3'	+	1735120	77	intron	NM_002074	GNB1	-	1716724	1822526
PT1_Y11.4	chr1	1791270	3'	+	1791305	35	intron	NM_002074	GNB1	-	1716724	1822526
PT1_Y0.2	chr1	1809470	5'	-	1809358	112	intron	NM_002074	GNB1	-	1716724	1822526
PT5_Y14.5	chr1	2385745	3'	+	2385892	147	22008	NM_014638	PLCH2	+	2407753	2436964
PT1_Y11.4	chr1	2453217	3'	+	2453563	346	exon	NM_018216	PANK4	-	2439974	2458035
PT4_Y12.2	chr1	7979076	3'	-	7979019	57	exon	NM_001561	TNFRSF9	-	7975930	8003225
PT3_Y0	chr1	8538850	3'	+	8538922	72	55103	NM_012102	RERE	-	8412463	8483747
PT1_Y11.4	chr1	8647633	3'	-	8647598	35	163886	NM_012102	RERE	-	8412463	8483747
PT5_Y14.5	chr1	8780529	3'	-	8780427	102	140529	NM_001428	ENO1	-	8921058	8931635
PT1_Y0.2	chr1	9755257	3'	+	9755349	92	intron	NM_005026	PIK3CD	+	9711789	9789172
PT1_Y11.4	chr1	10140487	3'	+	10140682	195	intron	NM_001105562	UBE4B	+	10093040	10241296
PT1_Y11.4	chr1	10415716	5'	-	10415420	296	intron	NM_183416	KIF1B	+	10270763	10441661
PT3_Y7.2	chr1	12669246	3'	+	12669327	81	intron	NM_004753	DHRS3	-	12627938	12677820
PT1_Y11.4	chr1	14039577	3'	-	14039424	153	intron	NM_001135610	PRDM2	+	14026734	14114574
PT1_Y11.4	chr1	14083879	5'	-	14083703	176	intron	NM_001135610	PRDM2	+	14026734	14114574
PT1_Y11.4	chr1	14083879	5'	-	14083710	169	intron	NM_001135610	PRDM2	+	14026734	14114574
PT1_Y11.4	chr1	14083879	5'	-	14083785	94	intron	NM_001135610	PRDM2	+	14026734	14114574
PT1_Y11.4	chr1	14083879	5'	-	14083846	33	intron	NM_001135610	PRDM2	+	14026734	14114574
PT1_Y11.4	chr1	16263305	3'	-	16263254	51	intron	NM_015001	SPEN	+	16174358	16266950
PT1_Y11.4	chr1	16763964	3'	-	16763586	378	45	NM_198546	SPATA21	-	16725137	16763919
PT5_Y14.5	chr1	18821331	3'	+	18821650	319	8851	NM_152375	KLHDC7A	+	18807423	18812480
PT1_Y11.4	chr1	20072945	3'	-	20072793	152	intron	NM_181719	TMCO4	-	20008705	20126410
PT1_Y11.4	chr1	21135724	5'	-	21135694	30	intron	NM_001198801	EIF4G3	-	21132784	21501251
PT1_Y11.4	chr1	21196604	3'	+	21196804	200	intron	NM_001198801	EIF4G3	-	21132784	21501251
PT4_Y12.2	chr1	21346591	3'	+	21346665	74	intron	NM_001198801	EIF4G3	-	21132784	21501251
PT1_Y11.4	chr1	21384984	3'	+	21385203	219	intron	NM_001198801	EIF4G3	-	21132784	21501251
PT3_Y7.2	chr1	22072665	3'	+	22072872	207	intron	NM_032236	USP48	-	22004791	22109688
PT3_Y7.2	chr1	22072665	3'	+	22072736	71	intron	NM_032236	USP48	-	22004791	22109688
PT1_Y11.4	chr1	22384661	3'	+	22384692	31	intron	NM_044472	CDC42	+	22379119	22419436
PT3_Y7.2	chr1	23637910	3'	-	23637858	52	intron	NM_001102398	HNRNPR	-	23636275	23670853
PT3_Y0	chr1	24083127	3'	+	24083404	277	intron	NM_003198	TCEB3	+	24069855	24088549
PT4_Y12.2	chr1	25242557	3'	+	25242615	58	intron	NM_004350	RUNX3	-	25226001	25291501
PT4_Y12.2	chr1	25774533	3'	+	25774559	26	intron	NM_018202	TMEM57	+	25757387	25826698
PT3_Y7.2	chr1	25886637	3'	+	25886762	125	intron	NM_015627	LDLRAP1	+	25870075	25895377
PT1_Y11.4	chr1	25956268	5'	+	25956419	151	intron	NM_020379	MAN1C1	+	25943958	26111258
PT1_Y11.4	chr1	26112722	5'	+	26112994	272	1464	NM_020379	MAN1C1	+	25943958	26111258
PT1_Y11.4	chr1	26808998	3'	-	26808833	165	5865	NM_005517	HMG2	+	26798901	26803133
PT1_Y11.4	chr1	26808998	3'	-	26808926	72	5865	NM_005517	HMG2	+	26798901	26803133
PT1_Y11.4	chr1	26808998	3'	-	26808930	68	5865	NM_005517	HMG2	+	26798901	26803133
PT1_Y11.4	chr1	26889261	3'	-	26889117	144	intron	NM_002953	RPS6KA1	+	26856248	26901520
PT1_Y11.4	chr1	26889261	3'	-	26889123	138	intron	NM_002953	RPS6KA1	+	26856248	26901520
PT5_Y14.5	chr1	27056289	3'	+	27056350	61	exon	NM_139135	ARID1A	+	27022521	27108601
PT3_Y7.2	chr1	27772803	5'	-	27772769	34	intron	NM_001201404	WASF2	-	27730733	27816678
PT4_Y12.2	chr1	28401337	3'	+	28401454	117	intron	NM_001990	EYA3	-	28296854	28415148
PT1_Y11.4	chr1	28795546	5'	-	28795255	291	intron	NM_001048183	PHACTR4	+	28696092	28826881
PT5_Y14.5	chr1	29071157	3'	+	29071279	122	intron	NM_001173128	YTHDF2	+	29063132	29096287
PT1_Y11.4	chr1	31456828	5'	+	31456892	64	intron	NM_001020658	PUM1	-	31404352	31538564
PT1_Y0.2	chr1	32523872	3'	+	32523962	90	14400	NM_006559	KHDRBS1	+	32479490	32509472
PT1_Y11.4	chr1	33415169	5'	+	33415217	48	intron	NM_001127361	RNF19B	-	33402049	33430286
PT1_Y11.4	chr1	35949300	3'	-	35948969	331	intron	NM_024874	KIAA0319L	-	35899090	36023037
PT1_Y11.4	chr1	35949300	3'	-	35949123	177	intron	NM_024874	KIAA0319L	-	35899090	36023037
PT1_Y11.4	chr1	35949295	5'	+	35949381	86	intron	NM_024874	KIAA0319L	-	35899090	36023037
PT1_Y11.4	chr1	35949295	5'	+	35949373	78	intron	NM_024874	KIAA0319L	-	35899090	36023037
PT1_Y11.4	chr1	35949295	5'	+	35949367	72	intron	NM_024874	KIAA0319L	-	35899090	36023037
PT1_Y11.4	chr1	35949295	5'	+	35949333	38	intron	NM_024874	KIAA0319L	-	35899090	36023037
PT1_Y11.4	chr1	35949300	3'	-	35949050	250	intron	NM_024874	KIAA0319L	-	35899090	36023037
PT1_Y11.4	chr1	35949295	5'	+	35949387	92	intron	NM_024874	KIAA0319L	-	35899090	36023037
PT1_Y11.4	chr1	35949295	5'	+	35949376	81	intron	NM_024874	KIAA0319L	-	35899090	36023037

PT1_Y11.4	chr1	35949753	3'	+	35949905	152	intron	NM_024874	KIAA0319L	-	35899090	36023037
PT1_Y11.4	chr1	35987614	3'	+	35987641	27	intron	NM_024874	KIAA0319L	-	35899090	36023037
PT1_Y11.4	chr1	35987614	3'	+	35987637	23	intron	NM_024874	KIAA0319L	-	35899090	36023037
PT1_Y11.4	chr1	37953704	5'	-	37953678	26	3726	NM_025079	ZC3H12A	+	37940118	37949978
PT3_Y7.2	chr1	37963910	3'	-	37963546	364	intron	NM_022756	MEAF6	-	37958175	37980364
PT1_Y11.4	chr1	39748189	5'	+	39748288	99	intron	NM_012090	MACF1	+	39547088	39952810
PT3_Y7.2	chr1	39748285	5'	+	39748388	103	intron	NM_012090	MACF1	+	39547088	39952810
PT1_Y11.4	chr1	39867517	5'	-	39867411	106	intron	NM_012090	MACF1	+	39547088	39952810
PT1_Y11.4	chr1	40696336	5'	-	40696206	130	intron	NM_012421	RLF	+	40627040	40706593
PT1_Y11.4	chr1	41162805	5'	+	41162944	139	intron	NM_014223	NFYC	+	41157241	41237275
PT4_Y12.2	chr1	42361213	3'	+	42361292	79	intron	NM_024503	HIVEP3	-	41975683	42501596
PT1_Y11.4	chr1	42724513	5'	+	42724737	224	intron	NM_001198850	FOXJ3	-	42642209	42800903
PT1_Y11.4	chr1	42724513	5'	+	42724575	62	intron	NM_001198850	FOXJ3	-	42642209	42800903
PT5_Y14.5	chr1	43155638	3'	-	43155425	213	intron	NM_004559	YBX1	+	43148065	43168020
PT1_Y11.4	chr1	44034729	3'	-	44034585	144	intron	NM_002840	PTPRF	+	43996546	44089343
PT1_Y11.4	chr1	51305870	5'	-	51305847	23	intron	NM_007051	FAF1	-	50906934	51425936
PT1_Y11.4	chr1	51438449	5'	-	51438299	150	intron	NM_001262	CDKN2C	+	51434366	51440309
PT4_Y12.2	chr1	51707372	3'	-	51707287	85	intron	NM_014372	RNF11	+	51701944	51739119
PT1_Y11.4	chr1	52329878	5'	+	52329939	61	intron	NM_002525	NRD1	-	52254865	52343712
PT1_Y11.4	chr1	52329878	5'	+	52329954	76	intron	NM_002525	NRD1	-	52254865	52343712
PT1_Y0.2	chr1	52707664	5'	-	52707637	27	intron	NM_007323	ZFYVE9	+	52608045	52812358
PT1_Y11.4	chr1	52872112	3'	-	52871955	157	intron	NM_032864	PRPF38A	+	52870218	52883992
PT3_Y7.2	chr1	52904006	5'	-	52903797	209	exon	NM_015269	ZCCHC11	-	52888947	53018762
PT1_Y11.4	chr1	52956520	3'	+	52956709	189	intron	NM_015269	ZCCHC11	-	52888947	53018762
PT1_Y11.4	chr1	52956520	3'	+	52956683	163	intron	NM_015269	ZCCHC11	-	52888947	53018762
PT1_Y11.4	chr1	52956520	3'	+	52956676	156	intron	NM_015269	ZCCHC11	-	52888947	53018762
PT1_Y4.8	chr1	52956520	3'	+	52956608	88	intron	NM_015269	ZCCHC11	-	52888947	53018762
PT1_Y11.4	chr1	53232338	3'	-	53232051	287	intron	NM_024646	ZYG11B	+	53192130	53293013
PT1_Y4.8	chr1	66812170	5'	-	66811702	468	intron	NM_001037341	PDE4B	+	66258192	66840262
PT1_Y4.8	chr1	66812170	5'	-	66811868	302	intron	NM_001037341	PDE4B	+	66258192	66840262
PT1_Y11.4	chr1	67404598	3'	+	67404735	137	intron	NM_001146110	MIER1	+	67390577	67454302
PT3_Y0	chr1	67787986	3'	-	67787871	115	intron	NM_001559	IL12RB2	+	67773046	67862583
PT4_Y12.2	chr1	70696089	3'	+	70696286	197	intron	NM_004768	SRSF11	+	70671364	70717701
PT1_Y11.4	chr1	78431326	5'	-	78431267	59	intron	NM_003902	FUBP1	-	78413590	78444777
PT4_Y12.2	chr1	89634943	3'	-	89634682	261	intron	NM_207398	GBP7	-	89597433	89641723
PT3_Y7.2	chr1	92282309	3'	+	92282514	205	intron	NM_001195683	TGFBR3	-	92145899	92371559
PT3_Y7.2	chr1	92291407	3'	+	92291678	271	intron	NM_001195683	TGFBR3	-	92145899	92371559
PT1_Y11.4	chr1	93439116	3'	+	93439442	326	12037	NM_001006605	FAM69A	-	93307720	93427079
PT1_Y11.4	chr1	93815739	3'	-	93815559	180	intron	NM_001938	DR1	+	93811477	93828148
PT1_Y11.4	chr1	93815734	5'	+	93815779	45	intron	NM_001938	DR1	+	93811477	93828148
PT1_Y11.4	chr1	93815739	3'	-	93815693	46	intron	NM_001938	DR1	+	93811477	93828148
PT1_Y11.4	chr1	93815739	3'	-	93815716	23	intron	NM_001938	DR1	+	93811477	93828148
PT1_Y11.4	chr1	93815734	5'	+	93815837	103	intron	NM_001938	DR1	+	93811477	93828148
PT1_Y11.4	chr1	100835813	3'	-	100835666	147	intron	NM_003672	CDC14A	+	100818022	100965021
PT3_Y7.2	chr1	100863968	3'	-	100863851	117	intron	NM_003672	CDC14A	+	100818022	100965021
PT1_Y4.8	chr1	101370519	3'	-	101370407	112	intron	NM_001144884	SLC30A7	+	101361631	101447311
PT4_Y12.2	chr1	101402728	3'	-	101402661	67	intron	NM_001144884	SLC30A7	+	101361631	101447311
PT1_Y11.4	chr1	101445580	5'	-	101445450	130	exon	NM_001144884	SLC30A7	+	101361631	101447311
PT1_Y4.8	chr1	101445580	5'	-	101445535	45	exon	NM_001144884	SLC30A7	+	101361631	101447311
PT1_Y11.4	chr1	109443124	3'	-	109442971	153	intron	NM_013296	GPSM2	+	109419602	109473044
PT1_Y11.4	chr1	111421307	3'	-	111421055	252	intron	NM_001040033	CD53	+	111413820	111442558
PT1_Y11.4	chr1	111714564	3'	+	111714748	184	intron	NM_001007794	CEPT1	+	111682248	111727724
PT1_Y11.4	chr1	111714564	3'	+	111714740	176	intron	NM_001007794	CEPT1	+	111682248	111727724
PT1_Y11.4	chr1	111714564	3'	+	111714698	134	intron	NM_001007794	CEPT1	+	111682248	111727724
PT1_Y11.4	chr1	111714564	3'	+	111714687	123	intron	NM_001007794	CEPT1	+	111682248	111727724
PT1_Y11.4	chr1	111714564	3'	+	111714675	111	intron	NM_001007794	CEPT1	+	111682248	111727724
PT1_Y11.4	chr1	111714564	3'	+	111714671	107	intron	NM_001007794	CEPT1	+	111682248	111727724
PT1_Y11.4	chr1	111714564	3'	+	111714643	79	intron	NM_001007794	CEPT1	+	111682248	111727724
PT1_Y11.4	chr1	112008565	3'	+	112008806	241	4040	NM_001688	ATP5F1	+	111991742	112004525
PT1_Y11.4	chr1	112009417	5'	-	112009136	281	4892	NM_001688	ATP5F1	+	111991742	112004525
PT1_Y11.4	chr1	112117465	3'	-	112117400	65	24163	NR_034126	LOC1001292	-	112141628	112150940
PT1_Y0.2	chr1	113126021	3'	+	113126105	84	intron	NM_138728	ST7L	-	113066140	113162040
PT1_Y11.4	chr1	116857023	5'	+	116857068	45	58771	NM_000701	ATP1A1	+	116915794	116947396
PT1_Y11.4	chr1	116938166	3'	-	116938051	115	intron	NM_000701	ATP1A1	+	116915794	116947396
PT3_Y0	chr1	117293636	3'	+	117293702	66	3449	NM_001767	CD2	+	117297085	117311851

PT1_Y0.2	chr1	117329507	3'	-	117329374	133	17656	NM_001767	CD2	+	117297085	117311851
PT1_Y11.4	chr1	118475599	3'	-	118475563	36	intron	NM_006784	WDR3	+	118472371	118503049
PT1_Y11.4	chr1	121484798	3'	+	121484940	142	171112	NR_003955	EMBP1	+	121260909	121313686
PT1_Y0.2	chr1	144924607	5'	-	144924468	139	intron	NM_001198832	PDE4DIP	-	144851423	144995033
PT1_Y11.4	chr1	144929226	3'	-	144928828	398	intron	NM_001198832	PDE4DIP	-	144851423	144995033
PT1_Y11.4	chr1	145269674	5'	+	145269744	70	intron	NM_203458	NOTCH2NL	+	145209110	145285912
PT1_Y11.4	chr1	150058428	3'	-	150058391	37	intron	NM_007259	VPS45	+	150039341	150117505
PT3_Y7.2	chr1	150064479	3'	-	150064233	246	exon	NM_007259	VPS45	+	150039341	150117505
PT1_Y11.4	chr1	150092532	3'	+	150092582	50	intron	NM_007259	VPS45	+	150039341	150117505
PT1_Y11.4	chr1	150117310	3'	-	150117257	53	exon	NM_007259	VPS45	+	150039341	150117505
PT1_Y11.4	chr1	150117310	3'	-	150117263	47	exon	NM_007259	VPS45	+	150039341	150117505
PT1_Y11.4	chr1	150190708	5'	-	150190624	84	8	NM_001136479	ANP32E	-	150190716	150208504
PT1_Y0.2	chr1	150395416	5'	-	150395225	191	intron	NM_015203	RPRD2	+	150336989	150449041
PT1_Y11.4	chr1	150916189	3'	+	150916325	136	intron	NM_001145415	SETDB1	+	150898814	150917797
PT1_Y11.4	chr1	150974678	5'	+	150974845	167	exon	NM_001163260	FAM63A	-	150969300	150980854
PT1_Y11.4	chr1	151387473	3'	-	151387323	150	intron	NM_207171	POGZ	-	151375199	151431941
PT1_Y11.4	chr1	151387473	3'	-	151387335	138	intron	NM_207171	POGZ	-	151375199	151431941
PT1_Y11.4	chr1	151387473	3'	-	151387423	50	intron	NM_207171	POGZ	-	151375199	151431941
PT1_Y11.4	chr1	151387473	3'	-	151387427	46	intron	NM_207171	POGZ	-	151375199	151431941
PT1_Y11.4	chr1	151387473	3'	-	151387447	26	intron	NM_207171	POGZ	-	151375199	151431941
PT3_Y7.2	chr1	151647994	3'	-	151647904	90	intron	NM_030918	SNX27	+	151584661	151671559
PT5_Y14.5	chr1	153617087	3'	+	153617259	172	intron	NM_015607	CHTOP	+	153606457	153618782
PT1_Y11.4	chr1	154185506	3'	+	154185555	49	intron	NM_015449	C1orf43	-	154179182	154193273
PT3_Y7.2	chr1	155306086	3'	+	155306245	159	exon	NM_018489	ASH1L	-	155305051	155532324
PT1_Y0.2	chr1	155414751	5'	+	155414773	22	intron	NM_018489	ASH1L	-	155305051	155532324
PT1_Y11.4	chr1	155812766	5'	-	155812628	138	intron	NM_001037533	GON4L	-	155719509	155826972
PT5_Y14.5	chr1	158322490	3'	-	158322343	147	995	NM_001185110	CD1E	+	158323485	158327343
PT1_Y11.4	chr1	160291145	5'	-	160291031	114	intron	NM_004371	COPA	-	160258376	160313354
PT1_Y0.2	chr1	160778046	3'	+	160778284	238	5563	NM_002348	LY9	+	160765927	160772483
PT1_Y11.4	chr1	161153754	3'	-	161153650	104	5783	NM_005099	ADAMTS4	-	161159537	161168845
PT4_Y12.2	chr1	161175189	3'	-	161175067	122	intron	NM_004550	NDUFS2	+	161169104	161184184
PT1_Y11.4	chr1	167214377	3'	-	167214271	106	intron	NM_002697	POU2F1	+	167190065	167396582
PT1_Y11.4	chr1	167241582	5'	-	167241519	63	intron	NM_002697	POU2F1	+	167190065	167396582
PT1_Y11.4	chr1	167276059	5'	-	167276029	30	intron	NM_002697	POU2F1	+	167190065	167396582
PT4_Y12.2	chr1	167646367	3'	-	167646210	157	intron	NM_052862	RCSD1	+	167599473	167675486
PT1_Y0.2	chr1	169559927	3'	+	169559999	72	intron	NM_003005	SELP	-	169558087	169599377
PT1_Y11.4	chr1	170043990	3'	+	170044082	92	5934	NM_014970	KIFAP3	-	169890469	170038056
PT1_Y11.4	chr1	172318820	5'	+	172318995	175	intron	NM_015569	DNM3	+	171810620	172381857
PT1_Y0.2	chr1	173917636	3'	-	173917603	33	intron	NM_172071	RC3H1	-	173900351	173962210
PT4_Y12.2	chr1	184038325	3'	+	184038441	116	intron	NM_001127394	TSEN15	+	184020810	184043344
PT1_Y0.2	chr1	184930122	3'	+	184930165	43	intron	NM_052966	FAM129A	-	184760165	184943682
PT1_Y11.4	chr1	192998382	5'	-	192998262	120	exon	NM_015984	UCHL5	-	192981495	193029237
PT1_Y11.4	chr1	193604115	3'	-	193604081	34	380173	NM_024529	CDC73	+	193091087	193223942
PT1_Y11.4	chr1	194485604	3'	+	194485665	61	1261662	NM_024529	CDC73	+	193091087	193223942
PT1_Y11.4	chr1	194485604	3'	+	194485650	46	1261662	NM_024529	CDC73	+	193091087	193223942
PT1_Y11.4	chr1	197160006	5'	-	197159786	220	intron	NM_194314	ZBTB41	-	197122813	197169672
PT1_Y11.4	chr1	197564955	5'	-	197564842	113	intron	NM_001195215	DENND1B	-	197473878	197744623
PT1_Y11.4	chr1	198506789	3'	-	198506485	304	intron	NM_133262	ATP6V1G3	-	198492351	198510075
PT1_Y11.4	chr1	198506789	3'	-	198506638	151	intron	NM_133262	ATP6V1G3	-	198492351	198510075
PT1_Y11.4	chr1	198506789	3'	-	198506647	142	intron	NM_133262	ATP6V1G3	-	198492351	198510075
PT1_Y11.4	chr1	198506789	3'	-	198506688	101	intron	NM_133262	ATP6V1G3	-	198492351	198510075
PT1_Y11.4	chr1	198506789	3'	-	198506699	90	intron	NM_133262	ATP6V1G3	-	198492351	198510075
PT1_Y11.4	chr1	198506789	3'	-	198506716	73	intron	NM_133262	ATP6V1G3	-	198492351	198510075
PT1_Y11.4	chr1	198506789	3'	-	198506723	66	intron	NM_133262	ATP6V1G3	-	198492351	198510075
PT1_Y11.4	chr1	198506784	5'	+	198506872	88	intron	NM_133262	ATP6V1G3	-	198492351	198510075
PT1_Y11.4	chr1	198506784	5'	+	198506863	79	intron	NM_133262	ATP6V1G3	-	198492351	198510075
PT1_Y11.4	chr1	198506784	5'	+	198506840	56	intron	NM_133262	ATP6V1G3	-	198492351	198510075
PT1_Y11.4	chr1	198506784	5'	+	198506830	46	intron	NM_133262	ATP6V1G3	-	198492351	198510075
PT1_Y11.4	chr1	198506784	5'	+	198506823	39	intron	NM_133262	ATP6V1G3	-	198492351	198510075
PT1_Y11.4	chr1	198506784	5'	+	198506814	30	intron	NM_133262	ATP6V1G3	-	198492351	198510075
PT1_Y11.4	chr1	198506784	5'	+	198506920	136	intron	NM_133262	ATP6V1G3	-	198492351	198510075
PT1_Y4.8	chr1	198506789	3'	-	198506654	135	intron	NM_133262	ATP6V1G3	-	198492351	198510075
PT1_Y4.8	chr1	198506784	5'	+	198506962	178	intron	NM_133262	ATP6V1G3	-	198492351	198510075
PT1_Y4.8	chr1	198506784	5'	+	198506928	144	intron	NM_133262	ATP6V1G3	-	198492351	198510075
PT2_Y12.9	chr1	198735574	3'	+	198735686	112	41557	NR_040073	LOC1001312	-	198777131	198906558

PT1_Y11.4	chr1	200202279	3'	+	200202344	65	18636	NM_001105517	FAM58BP	+	200182655	200183643
PT1_Y11.4	chr1	200202279	3'	+	200202329	50	18636	NM_001105517	FAM58BP	+	200182655	200183643
PT1_Y11.4	chr1	202735112	5'	-	202734849	263	intron	NM_006618	KDM5B	-	202696531	202777549
PT1_Y11.4	chr1	203771882	3'	-	203771696	186	intron	NM_014827	ZC3H11A	+	203764750	203823256
PT1_Y11.4	chr1	204763726	3'	+	204763892	166	34055	NM_001160333	NFASC	+	204797781	204991950
PT1_Y11.4	chr1	204763731	5'	-	204763485	246	34050	NM_001160333	NFASC	+	204797781	204991950
PT4_Y12.2	chr1	211838371	3'	-	211838232	139	intron	NM_001204182	NEK2	-	211831598	211848972
PT3_Y7.2	chr1	211981735	3'	-	211981669	66	intron	NM_014873	LPGAT1	-	211916798	212004114
PT1_Y11.4	chr1	212928395	3'	+	212928481	86	intron	NM_015471	NSL1	-	212899494	212965139
PT1_Y0.2	chr1	213044365	3'	+	213044470	105	intron	NM_014053	FLVCR1	+	213031596	213072705
PT2_Y12.9	chr1	218476558	3'	-	218476519	39	intron	NM_016052	RRP15	+	218458628	218511325
PT4_Y12.2	chr1	224026620	3'	-	224026560	60	intron	NM_005426	TP53BP2	-	223967594	224033674
PT5_Y14.5	chr1	224312720	3'	-	224312486	234	intron	NM_001136115	FBXO28	+	224301790	224349749
PT1_Y11.4	chr1	224475382	3'	+	224475506	124	intron	NM_206840	NVL	-	224415035	224517891
PT1_Y0.2	chr1	224614571	3'	-	224614491	80	intron	NM_001115113	WDR26	-	224572844	224622001
PT1_Y11.4	chr1	226090619	5'	+	226090679	60	13773	NM_020997	LEFTY1	-	226073981	226076846
PT4_Y12.2	chr1	229269033	3'	+	229269227	194	137845	NM_004578	RAB4A	+	229406878	229440518
PT1_Y11.4	chr1	229441247	3'	-	229441212	35	exon	NM_006542	SPHAR	+	229440128	229441250
PT1_Y11.4	chr1	229604369	3'	-	229604321	48	intron	NM_018230	NUP133	-	229577043	229644088
PT1_Y11.4	chr1	229626148	3'	-	229626042	106	intron	NM_018230	NUP133	-	229577043	229644088
PT1_Y11.4	chr1	229890852	3'	-	229890761	91	94906	NM_014777	URB2	+	229761980	229795946
PT1_Y11.4	chr1	229890847	5'	+	229890981	134	94901	NM_014777	URB2	+	229761980	229795946
PT1_Y0.2	chr1	230331850	5'	+	230331924	74	intron	NM_004481	GALNT2	+	230202955	230417875
PT5_Y14.5	chr1	234529299	3'	-	234529256	43	intron	NM_005646	TARBP1	-	234527058	234614849
PT5_Y14.5	chr1	234850415	3'	+	234850703	288	9373	NR_038856	LOC1005068	+	234859788	234867390
PT1_Y11.4	chr1	235341884	3'	+	235342036	152	intron	NM_031371	ARID4B	-	235330209	235490802
PT1_Y11.4	chr1	235903532	3'	-	235903489	43	intron	NM_000081	LYST	-	235824344	236030220
PT1_Y11.4	chr1	236003221	3'	-	236003134	87	intron	NM_000081	LYST	-	235824344	236030220
PT1_Y11.4	chr1	241797242	5'	-	241797164	78	exon	NM_001821	CHML	-	241792166	241799232
PT3_Y7.2	chr10	5212447	3'	+	5212592	145	intron	NR_027916	AKR1CL1	-	5196654	5227150
PT2_Y12.9	chr10	6390931	3'	-	6390662	269	12994	NR_040079	LOC399715	+	6319649	6377937
PT3_Y7.2	chr10	6991619	3'	-	6991481	138	106751	NR_038291	LOC1005071	+	6821559	6884868
PT1_Y4.8	chr10	12164240	5'	-	12164176	64	exon	NM_018706	DHTKD1	+	12110933	12165224
PT1_Y11.4	chr10	14761229	3'	-	14761180	49	intron	NM_031453	FAM107B	-	14560558	14816896
PT1_Y11.4	chr10	14803841	5'	-	14803505	336	intron	NM_031453	FAM107B	-	14560558	14816896
PT1_Y11.4	chr10	17225938	3'	-	17225713	225	intron	NM_004412	TRDMT1	-	17184981	17244070
PT1_Y11.4	chr10	17225938	3'	-	17225851	87	intron	NM_004412	TRDMT1	-	17184981	17244070
PT4_Y12.2	chr10	17463293	3'	+	17463365	72	intron	NM_001004470	ST8SIA6	-	17362675	17496254
PT1_Y11.4	chr10	22988011	5'	+	22988057	46	intron	NM_005028	PIP4K2A	-	22823765	23003503
PT1_Y11.4	chr10	22988011	5'	+	22988051	40	intron	NM_005028	PIP4K2A	-	22823765	23003503
PT1_Y11.4	chr10	22988011	5'	+	22988047	36	intron	NM_005028	PIP4K2A	-	22823765	23003503
PT1_Y0.2	chr10	27340515	5'	-	27340414	101	intron	NM_014915	ANKRD26	-	27293044	27389427
PT1_Y11.4	chr10	27428688	5'	-	27428536	152	intron	NM_014263	YME1L1	-	27399382	27443321
PT3_Y0	chr10	27431382	3'	+	27431449	67	exon	NM_014263	YME1L1	-	27399382	27443321
PT1_Y11.4	chr10	32118682	3'	+	32118748	66	intron	NM_018287	ARHGAP12	-	32095224	32217770
PT4_Y12.2	chr10	38208064	3'	+	38208258	194	30730	NM_145011	ZNF25	-	38238794	38265453
PT1_Y11.4	chr10	42365628	3'	-	42365608	20	461685	NR_024380	LOC441666	-	42827313	42863493
PT1_Y11.4	chr10	44281353	5'	+	44281424	71	1506	NR_002726	HNRNPA3P1	-	44282859	44285865
PT4_Y12.2	chr10	49615286	3'	+	49615508	222	intron	NM_139047	MAPK8	+	49609686	49643183
PT5_Y14.5	chr10	51575520	3'	-	51575395	125	intron	NM_001145263	NCOA4	+	51565107	51590734
PT5_Y14.5	chr10	51575520	3'	-	51575445	75	intron	NM_001145263	NCOA4	+	51565107	51590734
PT3_Y7.2	chr10	64448314	3'	+	64448404	90	16543	NM_014951	ZNF365	+	64133915	64431771
PT1_Y11.4	chr10	64996206	5'	+	64996381	175	intron	NM_004241	JMJD1C	-	64926987	65225722
PT1_Y11.4	chr10	65018667	3'	+	65018856	189	intron	NM_004241	JMJD1C	-	64926987	65225722
PT1_Y11.4	chr10	65018667	3'	+	65018850	183	intron	NM_004241	JMJD1C	-	64926987	65225722
PT1_Y11.4	chr10	69745271	3'	+	69745549	278	intron	NM_015601	HERC4	-	69681655	69835103
PT1_Y11.4	chr10	69745276	5'	-	69745232	44	intron	NM_015601	HERC4	-	69681655	69835103
PT3_Y0	chr10	69805753	3'	+	69805828	75	intron	NM_015601	HERC4	-	69681655	69835103
PT3_Y7.2	chr10	70093547	3'	-	70093508	39	intron	NM_021644	HNRNPH3	+	70091767	70102953
PT1_Y11.4	chr10	74813921	3'	-	74813606	315	intron	NM_001142596	P4HA1	-	74766979	74856732
PT1_Y11.4	chr10	74830436	5'	-	74830394	42	intron	NM_001142596	P4HA1	-	74766979	74856732
PT5_Y14.5	chr10	75193587	3'	-	75193521	66	268	NM_001024593	ZMYND17	-	75183336	75193319
PT1_Y11.4	chr10	75763674	3'	-	75763610	64	intron	NM_014000	VCL	+	75757871	75879914
PT1_Y0.2	chr10	76307914	3'	+	76308025	111	intron	NM_001202450	ADK	+	75910942	76469061
PT4_Y12.2	chr10	80823541	3'	+	80823953	412	intron	NR_015429	LOC283050	-	80703082	80827205

PT4_Y12.2	chr10	80823546	5'	-	80823409	137	intron	NR_015429	LOC283050	-	80703082	80827205
PT1_Y11.4	chr10	89628791	5'	+	89628866	75	intron	NM_000314	PTEN	+	89623194	89728532
PT1_Y11.4	chr10	94687083	3'	-	94687024	59	intron	NM_001013848	EXOC6	+	94594469	94819251
PT1_Y11.4	chr10	103550647	5'	+	103550706	59	intron	NM_001142434	MGEA5	-	103544199	103578222
PT1_Y11.4	chr10	103680991	3'	-	103680708	283	intron	NM_024541	C10orf76	-	103605355	103815932
PT1_Y11.4	chr10	103691570	3'	+	103691650	80	intron	NM_024541	C10orf76	-	103605355	103815932
PT1_Y11.4	chr10	104043452	3'	+	104043479	27	intron	NM_001199379	GBF1	+	104005254	104142656
PT3_Y7.2	chr10	104291288	3'	-	104291257	31	intron	NM_001178133	SUFU	+	104263718	104393214
PT1_Y4.8	chr10	104391498	3'	+	104391738	240	intron	NM_001178133	SUFU	+	104263718	104393214
PT1_Y11.4	chr10	105732896	5'	-	105732827	69	intron	NM_014720	SLK	+	105727469	105787342
PT3_Y7.2	chr10	106016222	3'	-	106016013	209	intron	NM_001191003	GSTO1	+	106013951	106027222
PT1_Y11.4	chr10	112682061	3'	+	112682305	244	intron	NM_007373	SHOC2	+	112679300	112773425
PT1_Y0.2	chr10	112731059	3'	+	112731450	391	intron	NM_007373	SHOC2	+	112679300	112773425
PT1_Y0.2	chr10	112731059	3'	+	112731225	166	intron	NM_007373	SHOC2	+	112679300	112773425
PT1_Y11.4	chr10	112761673	3'	-	112761349	324	intron	NM_007373	SHOC2	+	112679300	112773425
PT3_Y7.2	chr10	112777978	3'	+	112778020	42	4553	NM_007373	SHOC2	+	112679300	112773425
PT1_Y11.4	chr10	116242523	5'	-	116242314	209	intron	NM_006720	ABLIM1	-	116190868	116444414
PT5_Y14.5	chr10	116303540	3'	+	116303696	156	intron	NM_006720	ABLIM1	-	116190868	116444414
PT5_Y14.5	chr10	120217011	3'	+	120217265	254	115172	NM_001134672	FAM204A	-	120068571	120101839
PT5_Y14.5	chr10	120217011	3'	+	120217210	199	115172	NM_001134672	FAM204A	-	120068571	120101839
PT3_Y7.2	chr10	121336827	3'	-	121336714	113	intron	NM_003252	TIAL1	-	121332977	121356541
PT4_Y12.2	chr11	220871	3'	+	220918	47	intron	NM_012239	SIRT3	-	215029	236362
PT1_Y0.2	chr11	225752	3'	-	225590	162	intron	NM_012239	SIRT3	-	215029	236362
PT1_Y0.2	chr11	246110	5'	+	246271	161	intron	NM_175932	PSMD13	+	236807	252984
PT5_Y14.5	chr11	347462	3'	+	347484	22	22332	NM_178537	B4GALNT4	+	369794	382117
PT4_Y12.2	chr11	757513	3'	-	757373	140	intron	NM_006755	TALDO1	+	747431	765024
PT5_Y14.5	chr11	761110	3'	-	761055	55	intron	NM_006755	TALDO1	+	747431	765024
PT1_Y11.4	chr11	954831	5'	+	954957	126	intron	NM_001242837	AP2A2	+	925808	1012245
PT1_Y11.4	chr11	3808167	5'	+	3808441	274	intron	NM_139132	NUP98	-	3696239	3819022
PT1_Y11.4	chr11	4061854	3'	+	4062002	148	intron	NM_003156	STIM1	+	3876932	4114440
PT1_Y11.4	chr11	4082091	3'	-	4081971	120	intron	NM_003156	STIM1	+	3876932	4114440
PT1_Y11.4	chr11	4082091	3'	-	4081978	113	intron	NM_003156	STIM1	+	3876932	4114440
PT1_Y11.4	chr11	4082091	3'	-	4081982	109	intron	NM_003156	STIM1	+	3876932	4114440
PT4_Y12.2	chr11	6745747	3'	+	6745920	173	2637	NR_003945	GVINP1	-	6734380	6743110
PT1_Y11.4	chr11	9432282	3'	+	9432561	279	intron	NM_006391	IPO7	+	9406168	9469674
PT3_Y7.2	chr11	9463849	5'	+	9463876	27	intron	NM_006391	IPO7	+	9406168	9469674
PT1_Y0.2	chr11	11889607	3'	+	11889862	255	intron	NM_017944	USP47	+	11862969	11980872
PT3_Y7.2	chr11	13703198	3'	+	13703238	40	intron	NM_032228	FAR1	+	13690205	13753893
PT3_Y7.2	chr11	18515986	3'	+	18516211	225	intron	NM_006292	TSG101	-	18501857	18548503
PT3_Y7.2	chr11	18515986	3'	+	18516111	125	intron	NM_006292	TSG101	-	18501857	18548503
PT3_Y7.2	chr11	18515986	3'	+	18516099	113	intron	NM_006292	TSG101	-	18501857	18548503
PT1_Y11.4	chr11	20415724	5'	+	20415842	118	intron	NM_001145167	PRMT3	+	20409075	20530879
PT4_Y12.2	chr11	31505013	3'	+	31505154	141	intron	NM_144981	IMMP1L	-	31453948	31531169
PT1_Y11.4	chr11	35010968	3'	+	35011093	125	intron	NM_001166158	PDHX	+	34937676	35017675
PT4_Y12.2	chr11	43746590	3'	+	43746689	99	intron	NM_016142	HSD17B12	+	43702142	43878169
PT3_Y7.2	chr11	46851467	5'	+	46851730	263	intron	NM_014756	CKAP5	-	46765083	46867843
PT3_Y7.2	chr11	46851467	5'	+	46851711	244	intron	NM_014756	CKAP5	-	46765083	46867843
PT3_Y7.2	chr11	46851467	5'	+	46851653	186	intron	NM_014756	CKAP5	-	46765083	46867843
PT3_Y7.2	chr11	46851467	5'	+	46851608	141	intron	NM_014756	CKAP5	-	46765083	46867843
PT3_Y7.2	chr11	46851467	5'	+	46851527	60	intron	NM_014756	CKAP5	-	46765083	46867843
PT3_Y7.2	chr11	46851467	5'	+	46851512	45	intron	NM_014756	CKAP5	-	46765083	46867843
PT3_Y7.2	chr11	46851467	5'	+	46851507	40	intron	NM_014756	CKAP5	-	46765083	46867843
PT1_Y11.4	chr11	47999905	5'	-	47999812	93	2204	NM_002843	PTPRJ	+	48002109	48154266
PT1_Y11.4	chr11	59195260	5'	-	59195163	97	4834	NM_001001954	OR5A2	-	59189451	59190426
PT1_Y11.4	chr11	59327807	3'	+	59327827	20	14063	NM_002556	OSBP	-	59341870	59383617
PT1_Y11.4	chr11	60797769	5'	-	60797583	186	9921	NM_006725	CD6	+	60739114	60787848
PT1_Y11.4	chr11	60808543	3'	+	60808761	218	20695	NM_006725	CD6	+	60739114	60787848
PT1_Y0.2	chr11	60813127	5'	-	60812904	223	25279	NM_006725	CD6	+	60739114	60787848
PT4_Y12.2	chr11	60843649	3'	+	60843729	80	26280	NM_014207	CD5	+	60869929	60895323
PT5_Y14.5	chr11	62333622	3'	-	62333263	359	intron	NM_001404	EEF1G	-	62327072	62341460
PT1_Y0.2	chr11	62507520	5'	-	62507405	115	1412	NM_173810	TTC9C	+	62495951	62506108
PT1_Y11.4	chr11	62553636	3'	-	62553342	294	intron	NM_006473	TAF6L	+	62538774	62554813
PT1_Y11.4	chr11	62553636	3'	-	62553451	185	intron	NM_006473	TAF6L	+	62538774	62554813
PT1_Y11.4	chr11	62553636	3'	-	62553528	108	intron	NM_006473	TAF6L	+	62538774	62554813
PT3_Y0	chr11	63615264	3'	-	63615117	147	intron	NM_001163296	MARK2	+	63606399	63678492



PT5_Y14.5	chr11	63990195	3'	-	63990171	24	intron	NM_178443	FERMT3	+	63974151	63991363
PT3_Y7.2	chr11	64493484	3'	-	64493415	69	898	NM_001098670	RASGRP2	-	64494382	64511630
PT3_Y7.2	chr11	64502062	5'	+	64502144	82	intron	NM_001098670	RASGRP2	-	64494382	64511630
PT1_Y11.4	chr11	64539318	3'	+	64539484	166	intron	NM_201995	SF1	-	64532075	64545938
PT1_Y11.4	chr11	64542837	5'	-	64542643	194	intron	NM_201995	SF1	-	64532075	64545938
PT4_Y12.2	chr11	64640757	3'	+	64640797	40	intron	NM_006795	EHD1	-	64620207	64646191
PT1_Y11.4	chr11	64853544	3'	-	64853369	175	intron	NM_006782	ZFPL1	+	64851693	64855874
PT1_Y0.2	chr11	64960843	3'	-	64960679	164	intron	NM_001198868	CAPN1	+	64948685	64979477
PT1_Y11.4	chr11	64963533	3'	+	64963607	74	intron	NM_001198868	CAPN1	+	64948685	64979477
PT3_Y7.2	chr11	64965952	3'	+	64966178	226	intron	NM_001198868	CAPN1	+	64948685	64979477
PT3_Y7.2	chr11	65196009	3'	+	65196045	36	2006	NR_028272	NEAT1	+	65190268	65194003
PT1_Y11.4	chr11	65196438	3'	+	65196467	29	2435	NR_028272	NEAT1	+	65190268	65194003
PT1_Y11.4	chr11	65204226	3'	+	65204337	111	7702	NR_030343	MIR612	+	65211928	65212028
PT1_Y11.4	chr11	65268211	3'	-	65267939	272	exon	NR_002819	MALAT1	+	65265232	65273939
PT1_Y11.4	chr11	65271074	3'	-	65270718	356	exon	NR_002819	MALAT1	+	65265232	65273939
PT3_Y7.2	chr11	65273531	3'	+	65273824	293	exon	NR_002819	MALAT1	+	65265232	65273939
PT1_Y11.4	chr11	65400017	5'	-	65399708	309	intron	NM_032223	PCNXL3	+	65383782	65404910
PT3_Y7.2	chr11	65414265	3'	+	65414291	26	exon	NM_006747	SIPA1	+	65405577	65418391
PT5_Y14.5	chr11	65622864	3'	+	65622964	100	exon	NM_005507	CFL1	-	65622284	65625804
PT5_Y14.5	chr11	65706151	3'	-	65705860	291	6963	NM_152762	TSGA10IP	+	65713114	65727434
PT1_Y0.2	chr11	65852444	3'	+	65852477	33	intron	NM_018026	PACS1	+	65837823	66012213
PT4_Y12.2	chr11	65852765	3'	+	65852828	63	intron	NM_018026	PACS1	+	65837823	66012213
PT1_Y11.4	chr11	65926950	5'	-	65926871	79	intron	NM_018026	PACS1	+	65837823	66012213
PT1_Y11.4	chr11	65931238	3'	-	65931152	86	intron	NM_018026	PACS1	+	65837823	66012213
PT4_Y12.2	chr11	65964889	3'	-	65964762	127	intron	NM_018026	PACS1	+	65837823	66012213
PT1_Y0.2	chr11	66409776	3'	-	66409580	196	intron	NM_001198844	RBM4	+	66406087	66413944
PT1_Y11.4	chr11	66559742	3'	-	66559565	177	intron	NM_024650	C11orf80	+	66512206	66610987
PT1_Y11.4	chr11	66559742	3'	-	66559695	47	intron	NM_024650	C11orf80	+	66512206	66610987
PT1_Y11.4	chr11	66559742	3'	-	66559716	26	intron	NM_024650	C11orf80	+	66512206	66610987
PT1_Y11.4	chr11	66559742	3'	-	66559719	23	intron	NM_024650	C11orf80	+	66512206	66610987
PT1_Y11.4	chr11	66559737	5'	+	66559789	52	intron	NM_024650	C11orf80	+	66512206	66610987
PT1_Y11.4	chr11	66975159	5'	+	66975203	44	intron	NR_027473	KDM2A	+	66886739	67025550
PT5_Y14.5	chr11	66984976	3'	-	66984935	41	intron	NR_027473	KDM2A	+	66886739	67025550
PT1_Y11.4	chr11	66987043	3'	+	66987071	28	intron	NR_027473	KDM2A	+	66886739	67025550
PT1_Y0.2	chr11	66990716	5'	-	66990442	274	intron	NR_027473	KDM2A	+	66886739	67025550
PT1_Y11.4	chr11	66999189	3'	+	66999461	272	exon	NR_027473	KDM2A	+	66886739	67025550
PT3_Y7.2	chr11	67270284	3'	+	67270498	214	intron	NM_004910	PITPNM1	-	67259238	67272843
PT1_Y0.2	chr11	67860260	3'	-	67860102	158	intron	NM_001277	CHKA	-	67820325	67888858
PT4_Y12.2	chr11	71672116	3'	-	71672025	91	intron	NM_018320	RNF121	+	71639767	71708643
PT1_Y11.4	chr11	71744572	5'	+	71744645	73	intron	NM_006185	NUMA1	-	71713910	71791573
PT1_Y4.8	chr11	71744572	5'	+	71744756	184	intron	NM_006185	NUMA1	-	71713910	71791573
PT3_Y7.2	chr11	71766841	3'	-	71766643	198	intron	NM_006185	NUMA1	-	71713910	71791573
PT4_Y12.2	chr11	71778170	3'	-	71778049	121	intron	NM_006185	NUMA1	-	71713910	71791573
PT1_Y11.4	chr11	72574484	5'	-	72574462	22	intron	NM_014824	FCHSD2	-	72547789	72853143
PT3_Y7.2	chr11	72631999	3'	+	72632043	44	intron	NM_014824	FCHSD2	-	72547789	72853143
PT1_Y11.4	chr11	72760000	5'	-	72759951	49	intron	NM_014824	FCHSD2	-	72547789	72853143
PT1_Y11.4	chr11	72806987	3'	+	72807097	110	intron	NM_014824	FCHSD2	-	72547789	72853143
PT4_Y12.2	chr11	72824164	3'	-	72824091	73	intron	NM_014824	FCHSD2	-	72547789	72853143
PT4_Y12.2	chr11	72847866	3'	-	72847700	166	intron	NM_014824	FCHSD2	-	72547789	72853143
PT4_Y12.2	chr11	73217928	3'	-	73217778	150	intron	NM_015159	FAM168A	-	73117027	73309228
PT3_Y7.2	chr11	73426904	3'	-	73426846	58	intron	NM_002869	RAB6A	-	73386682	73472201
PT1_Y11.4	chr11	73914600	5'	-	73914565	35	intron	NM_016147	PPME1	+	73882367	73965748
PT1_Y11.4	chr11	74052501	5'	-	74052311	190	intron	NM_173582	PGM2L1	-	74041360	74109502
PT1_Y0.2	chr11	74124466	3'	-	74124366	100	14964	NM_173582	PGM2L1	-	74041360	74109502
PT1_Y11.4	chr11	75215968	5'	+	75215995	27	intron	NM_030792	GDPD5	-	75145684	75236599
PT1_Y0.2	chr11	75672478	5'	+	75672570	92	intron	NM_003369	UVRAG	+	75526211	75855282
PT1_Y11.4	chr11	75677218	3'	-	75677155	63	intron	NM_003369	UVRAG	+	75526211	75855282
PT1_Y0.2	chr11	86030829	5'	+	86030907	78	intron	NM_016401	C11orf73	+	86013252	86056985
PT4_Y12.2	chr11	89951130	3'	+	89951183	53	intron	NM_012124	CHORDC1	-	89933596	89956532
PT3_Y7.2	chr11	95071340	3'	+	95071490	150	107094	NM_144665	SESN3	-	94906132	94964246
PT4_Y12.2	chr11	95398878	3'	+	95399072	194	103227	NM_144664	FAM76B	-	95502105	95522954
PT1_Y11.4	chr11	95460944	5'	+	95461259	315	41161	NM_144664	FAM76B	-	95502105	95522954
PT1_Y11.4	chr11	95460944	5'	+	95461209	265	41161	NM_144664	FAM76B	-	95502105	95522954
PT1_Y11.4	chr11	95460944	5'	+	95461162	218	41161	NM_144664	FAM76B	-	95502105	95522954
PT1_Y11.4	chr11	95460944	5'	+	95461134	190	41161	NM_144664	FAM76B	-	95502105	95522954

PT1_Y11.4	chr11	95460944	5'	+	95461082	138	41161	NM_144664	FAM76B	-	95502105	95522954
PT1_Y11.4	chr11	95460944	5'	+	95461095	151	41161	NM_144664	FAM76B	-	95502105	95522954
PT3_Y0	chr11	95712890	3'	-	95712854	36	exon	NM_032427	MAML2	-	95711439	96076344
PT1_Y11.4	chr11	97681102	3'	-	97680837	265	1210768	NM_175566	CNTN5	+	98891870	100227473
PT1_Y11.4	chr11	104581194	5'	-	104581029	165	175250	NM_001191016	CASP12	-	104756444	104769397
PT1_Y4.8	chr11	104784287	3'	+	104784382	95	intron	NR_034078	LOC643733	-	104772275	104788902
PT1_Y0.2	chr11	108026849	5'	+	108026961	112	1269	NM_002519	NPAT	-	108028118	108093365
PT1_Y0.2	chr11	108061252	3'	-	108061050	202	intron	NM_002519	NPAT	-	108028118	108093365
PT3_Y7.2	chr11	108159694	3'	+	108159775	81	intron	NM_000051	ATM	+	108093558	108239826
PT1_Y11.4	chr11	108170643	3'	-	108170586	57	intron	NM_000051	ATM	+	108093558	108239826
PT1_Y11.4	chr11	108181338	5'	+	108181391	53	intron	NM_000051	ATM	+	108093558	108239826
PT1_Y11.4	chr11	116865420	3'	+	116865505	85	intron	NM_025164	SIK3	-	116714117	116968993
PT1_Y11.4	chr11	117005963	5'	-	117005934	29	9036	NM_001184748	PAFAH1B2	+	117014999	117041761
PT1_Y11.4	chr11	117041597	3'	+	117041843	246	intron	NM_001184748	PAFAH1B2	+	117014999	117041761
PT1_Y11.4	chr11	117041597	3'	+	117041835	238	intron	NM_001184748	PAFAH1B2	+	117014999	117041761
PT1_Y0.2	chr11	117902092	5'	+	117902215	123	intron	NR_038318	LOC1005267	-	117886486	117957508
PT3_Y7.2	chr11	117911525	3'	+	117911554	29	intron	NR_038318	LOC1005267	-	117886486	117957508
PT1_Y11.4	chr11	118092928	5'	+	118092955	27	7407	NM_198275	MPZL3	-	118100335	118123011
PT4_Y12.2	chr11	118097865	3'	+	118097915	50	2470	NM_198275	MPZL3	-	118100335	118123011
PT3_Y7.2	chr11	118140542	3'	-	118140388	154	5291	NM_005797	MPZL2	-	118124130	118135251
PT3_Y7.2	chr11	118199552	3'	-	118199346	206	10236	NM_000732	CD3D	-	118209788	118213459
PT3_Y0	chr11	118313028	5'	-	118312854	174	intron	NM_005933	MLL	+	118307204	118397539
PT3_Y7.2	chr11	118350965	3'	+	118351024	59	intron	NM_005933	MLL	+	118307204	118397539
PT3_Y7.2	chr11	118361830	3'	+	118361907	77	intron	NM_005933	MLL	+	118307204	118397539
PT5_Y14.5	chr11	118387848	3'	-	118387522	326	intron	NM_005933	MLL	+	118307204	118397539
PT1_Y11.4	chr11	118451934	3'	+	118452205	271	intron	NM_001142281	ARCN1	+	118443101	118473747
PT1_Y11.4	chr11	118451934	3'	+	118452199	265	intron	NM_001142281	ARCN1	+	118443101	118473747
PT1_Y11.4	chr11	118636882	5'	-	118636784	98	intron	NM_004397	DDX6	-	118618472	118661972
PT1_Y11.4	chr11	118636882	5'	-	118636825	57	intron	NM_004397	DDX6	-	118618472	118661972
PT1_Y11.4	chr11	118636882	5'	-	118636830	52	intron	NM_004397	DDX6	-	118618472	118661972
PT1_Y11.4	chr11	118636882	5'	-	118636844	38	intron	NM_004397	DDX6	-	118618472	118661972
PT1_Y11.4	chr11	118636882	5'	-	118636852	30	intron	NM_004397	DDX6	-	118618472	118661972
PT1_Y11.4	chr11	118636882	5'	-	118636846	36	intron	NM_004397	DDX6	-	118618472	118661972
PT1_Y4.8	chr11	118636882	5'	-	118636592	290	intron	NM_004397	DDX6	-	118618472	118661972
PT1_Y0.2	chr11	118636877	3'	+	118636998	121	intron	NM_004397	DDX6	-	118618472	118661972
PT1_Y0.2	chr11	118636882	5'	-	118636616	266	intron	NM_004397	DDX6	-	118618472	118661972
PT1_Y0.2	chr11	118636882	5'	-	118636805	77	intron	NM_004397	DDX6	-	118618472	118661972
PT1_Y0.2	chr11	118636882	5'	-	118636823	59	intron	NM_004397	DDX6	-	118618472	118661972
PT1_Y4.8	chr11	121398660	3'	-	121398356	304	intron	NM_003105	SORL1	+	121322911	121504471
PT1_Y11.4	chr11	122562384	3'	+	122562450	66	intron	NM_032873	UBASH3B	+	122526397	122685187
PT1_Y11.4	chr11	122602884	3'	+	122603144	260	intron	NM_032873	UBASH3B	+	122526397	122685187
PT1_Y4.8	chr11	125502034	3'	-	125501999	35	intron	NM_001114122	CHEK1	+	125495035	125525640
PT4_Y12.2	chr11	128125228	3'	-	128125050	178	203427	NM_001143820	ETS1	-	128328655	128392205
PT1_Y11.4	chr11	128312562	3'	-	128312427	135	16093	NM_001143820	ETS1	-	128328655	128392205
PT1_Y11.4	chr11	128379482	3'	-	128379368	114	intron	NM_001143820	ETS1	-	128328655	128392205
PT1_Y11.4	chr11	128379483	3'	-	128379368	115	intron	NM_001143820	ETS1	-	128328655	128392205
PT1_Y0.2	chr11	128394397	3'	+	128394432	35	2192	NM_001143820	ETS1	-	128328655	128392205
PT1_Y11.4	chr11	128571108	5'	-	128571066	42	intron	NM_001167681	FLI1	+	128563810	128683162
PT1_Y11.4	chr12	427700	5'	+	427948	248	intron	NM_001042603	KDM5A	-	389222	498620
PT1_Y0.2	chr12	899991	5'	-	899928	63	intron	NM_001184985	WNK1	+	862088	1020618
PT3_Y7.2	chr12	905922	3'	+	906148	226	intron	NM_001184985	WNK1	+	862088	1020618
PT5_Y14.5	chr12	986844	3'	-	986784	60	intron	NM_001184985	WNK1	+	862088	1020618
PT3_Y7.2	chr12	4295561	3'	-	4295379	182	87340	NM_001759	CCND2	+	4382901	4414522
PT1_Y11.4	chr12	6858388	3'	-	6858272	116	intron	NM_005439	MLF2	-	6857157	6862636
PT1_Y0.2	chr12	6927712	3'	+	6927812	100	intron	NM_000616	CD4	+	6898637	6929976
PT1_Y0.2	chr12	6927712	3'	+	6927751	39	intron	NM_000616	CD4	+	6898637	6929976
PT1_Y11.4	chr12	8844917	3'	+	8845136	219	5600	NM_020734	RIMKLB	+	8850517	8929787
PT1_Y11.4	chr12	9845186	5'	+	9845378	192	intron	NR_036693	CLEC2D	+	9822307	9852151
PT3_Y7.2	chr12	9905287	3'	-	9905254	33	exon	NM_001781	CD69	-	9905081	9913497
PT1_Y11.4	chr12	9924832	5'	-	9924791	41	11335	NM_001781	CD69	-	9905081	9913497
PT1_Y0.2	chr12	12020890	5'	-	12020843	47	intron	NM_001987	ETV6	+	11802787	12048325
PT1_Y0.2	chr12	12311516	3'	-	12311495	21	intron	NM_002336	LRP6	-	12268960	12419811
PT1_Y0.2	chr12	12605917	3'	-	12605617	300	intron	NM_058169	LOH12CR1	+	12510019	12619838
PT1_Y0.2	chr12	12605917	3'	-	12605767	150	intron	NM_058169	LOH12CR1	+	12510019	12619838
PT4_Y12.2	chr12	12612377	3'	+	12612662	285	intron	NM_058169	LOH12CR1	+	12510019	12619838

PT1_Y11.4	chr12	12874089	3'	-	12873935	154	exon	NM_004064	CDKN1B	+	12870301	12875305
PT1_Y11.4	chr12	12874085	5'	+	12874164	79	exon	NM_004064	CDKN1B	+	12870301	12875305
PT1_Y11.4	chr12	12874254	5'	+	12874328	74	exon	NM_004064	CDKN1B	+	12870301	12875305
PT1_Y11.4	chr12	12874259	3'	-	12874051	208	exon	NM_004064	CDKN1B	+	12870301	12875305
PT1_Y11.4	chr12	13010873	3'	-	13010678	195	17537	NR_003932	RPL13AP20	+	13028410	13029070
PT1_Y11.4	chr12	13010873	3'	-	13010838	35	17537	NR_003932	RPL13AP20	+	13028410	13029070
PT1_Y11.4	chr12	14524604	5'	+	14524719	115	intron	NM_018179	ATF7IP	+	14518610	14651697
PT1_Y4.8	chr12	14631401	3'	-	14631250	151	exon	NM_018179	ATF7IP	+	14518610	14651697
PT1_Y4.8	chr12	14631396	5'	+	14631538	142	exon	NM_018179	ATF7IP	+	14518610	14651697
PT1_Y4.8	chr12	14631396	5'	+	14631451	55	exon	NM_018179	ATF7IP	+	14518610	14651697
PT1_Y0.2	chr12	14946441	3'	-	14946269	172	intron	NM_016312	WBP11	-	14939411	14956401
PT1_Y0.2	chr12	14946441	3'	-	14946315	126	intron	NM_016312	WBP11	-	14939411	14956401
PT1_Y0.2	chr12	14946436	5'	+	14946737	301	intron	NM_016312	WBP11	-	14939411	14956401
PT3_Y0	chr12	22552354	3'	+	22552661	307	49163	NM_014802	KIAA0528	-	22601517	22697452
PT1_Y11.4	chr12	25393118	5'	-	25393061	57	intron	NM_033360	KRAS	-	25358179	25403854
PT1_Y0.2	chr12	28436644	3'	+	28436792	148	intron	NM_018318	CCDC91	+	28410132	28703099
PT1_Y11.4	chr12	32007438	5'	+	32007551	113	62263	NM_001013699	H3F3C	-	31944118	31945175
PT3_Y0	chr12	32670812	3'	+	32671000	188	intron	NM_139241	FGD4	+	32655040	32798984
PT3_Y7.2	chr12	39761136	3'	-	39760831	305	intron	NM_001173464	KIF21A	-	39687029	39837192
PT1_Y11.4	chr12	39997835	3'	-	39997451	384	intron	NM_005164	ABCD2	-	39945021	40013843
PT1_Y11.4	chr12	44932819	3'	-	44932794	25	intron	NM_001145110	NELL2	-	44902057	45270633
PT1_Y11.4	chr12	44932820	3'	-	44932790	30	intron	NM_001145110	NELL2	-	44902057	45270633
PT5_Y14.5	chr12	46151066	3'	+	46151262	196	intron	NM_152641	ARID2	+	46123619	46301819
PT4_Y12.2	chr12	46259128	3'	-	46259012	116	intron	NM_152641	ARID2	+	46123619	46301819
PT4_Y12.2	chr12	46259128	3'	-	46259092	36	intron	NM_152641	ARID2	+	46123619	46301819
PT1_Y11.4	chr12	46288394	3'	+	46288542	148	intron	NM_152641	ARID2	+	46123619	46301819
PT2_Y12.9	chr12	46595029	3'	+	46595143	114	intron	NM_001077484	SLC38A1	-	46576840	46663208
PT2_Y12.9	chr12	46659299	3'	+	46659333	34	intron	NM_001077484	SLC38A1	-	46576840	46663208
PT4_Y12.2	chr12	47747147	3'	+	47747355	208	116704	NM_138371	FAM113B	+	47610051	47630443
PT4_Y12.2	chr12	47747147	3'	+	47747180	33	116704	NM_138371	FAM113B	+	47610051	47630443
PT1_Y11.4	chr12	48078253	3'	+	48078364	111	intron	NM_001146075	RPAP3	-	48055714	48099844
PT1_Y11.4	chr12	48078258	5'	-	48078143	115	intron	NM_001146075	RPAP3	-	48055714	48099844
PT1_Y11.4	chr12	48216328	5'	-	48215862	466	2565	NM_015401	HDAC7	-	48176506	48213763
PT4_Y12.2	chr12	49099489	5'	+	49099681	192	intron	NM_001240	CCNT1	-	49086751	49110781
PT1_Y0.2	chr12	49857510	3'	+	49857734	224	intron	NM_023071	SPATS2	+	49760687	49921207
PT1_Y11.4	chr12	50581250	3'	+	50581379	129	intron	NM_016357	LIMA1	-	50569562	50616488
PT1_Y0.2	chr12	51031678	3'	-	51031642	36	intron	NM_173602	DIP2B	+	50898767	51142450
PT1_Y0.2	chr12	51031673	5'	+	51031709	36	intron	NM_173602	DIP2B	+	50898767	51142450
PT1_Y11.4	chr12	53029299	5'	-	53029149	150	9042	NM_000423	KRT2	-	53038341	53045959
PT4_Y12.2	chr12	53619733	3'	+	53619784	51	5583	NM_000966	RARG	-	53604352	53614150
PT1_Y11.4	chr12	53781431	3'	+	53781501	70	intron	NM_138473	SP1	+	53773978	53810226
PT1_Y11.4	chr12	53852878	5'	-	53852828	50	intron	NM_001128914	PCBP2	+	53845885	53874946
PT1_Y11.4	chr12	53852878	5'	-	53852842	36	intron	NM_001128914	PCBP2	+	53845885	53874946
PT3_Y7.2	chr12	54724415	3'	+	54724498	83	intron	NM_016057	COPZ1	+	54718910	54745633
PT1_Y11.4	chr12	54810603	3'	+	54810648	45	intron	NM_002205	ITGA5	-	54789044	54813050
PT1_Y11.4	chr12	54810603	3'	+	54810639	36	intron	NM_002205	ITGA5	-	54789044	54813050
PT1_Y0.2	chr12	55258424	5'	-	55258279	145	6250	NM_058173	MUCL1	+	55248298	55252174
PT1_Y11.4	chr12	55365350	5'	-	55365011	339	intron	NM_001136030	KIAA0748	-	55343864	55375622
PT1_Y11.4	chr12	55365350	5'	-	55365240	110	intron	NM_001136030	KIAA0748	-	55343864	55375622
PT1_Y11.4	chr12	55365350	5'	-	55365246	104	intron	NM_001136030	KIAA0748	-	55343864	55375622
PT1_Y11.4	chr12	55365350	5'	-	55365300	50	intron	NM_001136030	KIAA0748	-	55343864	55375622
PT3_Y0	chr12	56314112	3'	+	56314150	38	intron	NM_001143853	WIBG	-	56295196	56321697
PT5_Y14.5	chr12	56387531	3'	+	56387883	352	exon	NM_002868	RAB5B	+	56367861	56388488
PT4_Y12.2	chr12	56430186	3'	+	56430316	130	exon	NM_022465	IKZF4	+	56414688	56432219
PT1_Y11.4	chr12	56679797	3'	+	56680103	306	exon	NM_004077	CS	-	56665482	56694175
PT1_Y4.8	chr12	56829394	5'	+	56829458	64	intron	NM_003920	TIMELESS	-	56810156	56843200
PT3_Y7.2	chr12	57003625	3'	+	57003656	31	exon	NM_013449	BAZ2A	-	56989379	57030163
PT1_Y11.4	chr12	57015152	3'	-	57015116	36	intron	NM_013449	BAZ2A	-	56989379	57030163
PT1_Y11.4	chr12	57068066	5'	+	57068132	66	intron	NM_006601	PTGES3	-	57057124	57082078
PT1_Y11.4	chr12	57402479	3'	-	57402429	50	1301	NM_001178054	TAC3	-	57403780	57410344
PT4_Y12.2	chr12	57466275	3'	+	57466301	26	intron	NM_001130963	TMEM194A	-	57449425	57472574
PT1_Y11.4	chr12	57731635	5'	+	57731769	134	27389	NM_014925	R3HDM2	-	57647547	57704246
PT1_Y0.2	chr12	57731635	5'	+	57731761	126	27389	NM_014925	R3HDM2	-	57647547	57704246
PT1_Y0.2	chr12	57731635	5'	+	57731730	95	27389	NM_014925	R3HDM2	-	57647547	57704246
PT1_Y0.2	chr12	57731635	5'	+	57731665	30	27389	NM_014925	R3HDM2	-	57647547	57704246

PT1_Y11.4	chr12	57761133	5'	+	57761420	287	56887	NM_014925	R3HDM2	-	57647547	57704246
PT1_Y0.2	chr12	57810978	3'	-	57810918	60	17564	NM_005538	INHBC	+	57828542	57844609
PT1_Y11.4	chr12	57898833	3'	+	57898939	106	intron	NM_004990	MARS	+	57881735	57910438
PT1_Y11.4	chr12	57902466	3'	+	57902507	41	intron	NM_004990	MARS	+	57881735	57910438
PT1_Y0.2	chr12	62749267	3'	-	62749102	165	intron	NM_006313	USP15	+	62654186	62799898
PT1_Y11.4	chr12	62959923	5'	+	62960038	115	intron	NM_015026	MON2	+	62860596	62991363
PT2_Y12.9	chr12	64186554	3'	-	64186440	114	intron	NM_014254	TMEM5	+	64173636	64202887
PT1_Y11.4	chr12	65582596	5'	-	65582203	393	intron	NM_014319	LEMD3	+	65563350	65642141
PT3_Y7.2	chr12	66709123	3'	-	66708987	136	exon	NM_033647	HELB	+	66696355	66731958
PT3_Y7.2	chr12	66709123	3'	-	66709028	95	exon	NM_033647	HELB	+	66696355	66731958
PT3_Y7.2	chr12	66709123	3'	-	66709064	59	exon	NM_033647	HELB	+	66696355	66731958
PT1_Y11.4	chr12	69991964	3'	-	69991919	45	intron	NM_006431	CCT2	+	69979207	69995357
PT1_Y4.8	chr12	76215519	5'	+	76215540	21	203707	NM_007350	PHLDA1	-	76419226	76425556
PT1_Y11.4	chr12	76216573	5'	-	76216493	80	202653	NM_007350	PHLDA1	-	76419226	76425556
PT1_Y11.4	chr12	80220397	3'	+	80220465	68	intron	NM_001143886	PPP1R12A	-	80167342	80329235
PT1_Y0.2	chr12	92219270	3'	+	92219305	35	314783	NM_001731	BTG1	-	92534053	92539673
PT4_Y12.2	chr12	92526400	3'	+	92526480	80	7653	NM_001731	BTG1	-	92534053	92539673
PT1_Y11.4	chr12	92870162	5'	-	92869992	170	45432	NR_027933	CLLU1	+	92815306	92824730
PT1_Y0.2	chr12	93941574	3'	-	93941511	63	17829	NR_038263	LOC144481	-	93959403	93965174
PT1_Y0.2	chr12	94765251	5'	-	94765067	184	intron	NM_016122	CCDC41	-	94702055	94853764
PT2_Y12.9	chr12	99745275	3'	+	99745617	342	196407	NM_152788	ANKS1B	-	99128568	99548868
PT4_Y12.2	chr12	107353077	3'	-	107352896	181	intron	NM_152261	C12orf23	+	107349543	107367813
PT4_Y12.2	chr12	107353077	3'	-	107353011	66	intron	NM_152261	C12orf23	+	107349543	107367813
PT3_Y7.2	chr12	107361746	5'	+	107361886	140	intron	NM_152261	C12orf23	+	107349543	107367813
PT4_Y12.2	chr12	110585436	3'	+	110585507	71	intron	NM_014055	IFT81	+	110562139	110606250
PT4_Y12.2	chr12	110585436	3'	+	110585461	25	intron	NM_014055	IFT81	+	110562139	110606250
PT1_Y11.4	chr12	111861124	5'	+	111861163	39	intron	NM_005475	SH2B3	+	111843751	111889427
PT5_Y14.5	chr12	111956942	3'	+	111957419	477	intron	NM_002973	ATXN2	-	111890017	112037480
PT1_Y4.8	chr12	112031791	5'	+	112031911	120	intron	NM_002973	ATXN2	-	111890017	112037480
PT1_Y11.4	chr12	112478419	3'	+	112478493	74	intron	NM_024953	NAA25	-	112464492	112546635
PT1_Y11.4	chr12	112478424	5'	-	112478354	70	intron	NM_024953	NAA25	-	112464492	112546635
PT1_Y11.4	chr12	112498250	3'	+	112498340	90	intron	NM_024953	NAA25	-	112464492	112546635
PT1_Y11.4	chr12	112652549	5'	+	112652586	37	intron	NM_001109662	C12orf51	-	112597991	112819896
PT1_Y11.4	chr12	120443204	3'	+	120443271	67	intron	NM_207311	CCDC64	+	120427647	120532299
PT1_Y11.4	chr12	121142955	5'	-	121142869	86	3288	NM_014730	MLEC	+	121124948	121139667
PT4_Y12.2	chr12	121228486	5'	-	121228116	370	intron	NM_139015	SPPL3	-	121200312	121342155
PT4_Y12.2	chr12	121228486	5'	-	121228304	182	intron	NM_139015	SPPL3	-	121200312	121342155
PT3_Y7.2	chr12	121673783	3'	+	121673873	90	1711	NM_172226	CAMKK2	-	121675494	121736111
PT5_Y14.5	chr12	122852983	3'	-	122852870	113	intron	NM_002956	CLIP1	-	122755980	122907116
PT1_Y11.4	chr12	122974739	5'	-	122974658	81	intron	NM_017612	ZCCHC8	-	122956145	122985543
PT1_Y11.4	chr12	122975453	3'	+	122975600	147	intron	NM_017612	ZCCHC8	-	122956145	122985543
PT1_Y11.4	chr12	122998029	3'	-	122997800	229	intron	NR_036435	RSRC2	-	122989189	123011560
PT1_Y11.4	chr12	122998029	3'	-	122997861	168	intron	NR_036435	RSRC2	-	122989189	123011560
PT1_Y11.4	chr12	122998029	3'	-	122997921	108	intron	NR_036435	RSRC2	-	122989189	123011560
PT1_Y11.4	chr12	122998024	5'	+	122998227	203	intron	NR_036435	RSRC2	-	122989189	123011560
PT1_Y11.4	chr12	122998029	3'	-	122997822	207	intron	NR_036435	RSRC2	-	122989189	123011560
PT1_Y11.4	chr12	122998029	3'	-	122997941	88	intron	NR_036435	RSRC2	-	122989189	123011560
PT3_Y7.2	chr12	123902207	5'	+	123902346	139	intron	NM_145058	RILPL2	-	123899935	123921264
PT1_Y11.4	chr12	124073996	5'	+	124074118	122	intron	NM_006815	TMED2	+	124069075	124082688
PT1_Y11.4	chr12	124080558	3'	-	124080413	145	intron	NM_006815	TMED2	+	124069075	124082688
PT1_Y11.4	chr12	124080558	3'	-	124080422	136	intron	NM_006815	TMED2	+	124069075	124082688
PT1_Y11.4	chr12	124080558	3'	-	124080429	129	intron	NM_006815	TMED2	+	124069075	124082688
PT1_Y11.4	chr12	124080553	5'	+	124080661	108	intron	NM_006815	TMED2	+	124069075	124082688
PT1_Y11.4	chr12	124080553	5'	+	124080648	95	intron	NM_006815	TMED2	+	124069075	124082688
PT1_Y11.4	chr12	124080553	5'	+	124080592	39	intron	NM_006815	TMED2	+	124069075	124082688
PT5_Y14.5	chr12	125456619	3'	+	125457191	572	intron	NM_032656	DHX37	-	125431369	125473667
PT3_Y7.2	chr12	132248252	3'	+	132248374	122	intron	NM_004592	SFSWAP	+	132195634	132284282
PT4_Y12.2	chr12	133627862	3'	+	133627883	21	intron	NM_003428	ZNF84	+	133613877	133639885
PT1_Y11.4	chr13	20479371	5'	-	20479345	26	41595	NM_001142684	ZMYM5	-	20397623	20437776
PT1_Y11.4	chr13	20595970	3'	+	20596016	46	intron	NM_197968	ZMYM2	+	20532809	20665968
PT1_Y0.2	chr13	21438770	3'	+	21438817	47	intron	NM_022459	XPO4	-	21351467	21476913
PT1_Y0.2	chr13	21438775	5'	-	21438520	255	intron	NM_022459	XPO4	-	21351467	21476913
PT1_Y0.2	chr13	21958282	5'	-	21958196	86	intron	NM_153251	ZDHHC20	-	21946709	22033508
PT3_Y7.2	chr13	30829171	3'	+	30829294	123	intron	NM_032116	KATNAL1	-	30776766	30881163
PT1_Y11.4	chr13	32705980	3'	+	32706029	49	intron	NM_023037	FRY	+	32605436	32870776

PT1_Y11.4	chr13	32705980	3'	+	32706019	39	intron	NM_023037	FRY	+	32605436	32870776
PT1_Y11.4	chr13	41813656	3'	-	41813433	223	intron	NM_004294	MTRF1	-	41790515	41837713
PT1_Y11.4	chr13	46750461	3'	+	46750611	150	intron	NM_002298	LCP1	-	46700057	46756459
PT1_Y4.8	chr13	49006193	5'	+	49006441	248	intron	NM_000321	RB1	+	48877882	49056026
PT1_Y11.4	chr13	49037328	3'	+	49037630	302	intron	NM_000321	RB1	+	48877882	49056026
PT1_Y11.4	chr13	49037333	5'	-	49037258	75	intron	NM_000321	RB1	+	48877882	49056026
PT1_Y11.4	chr13	49037333	5'	-	49037264	69	intron	NM_000321	RB1	+	48877882	49056026
PT1_Y11.4	chr13	49825736	5'	-	49825525	211	intron	NR_036439	CDADC1	+	49822046	49867622
PT3_Y7.2	chr13	50343365	3'	-	50343090	275	intron	NM_002267	KPNA3	-	50273442	50367057
PT1_Y11.4	chr13	52001839	5'	-	52001805	34	intron	NM_012141	INTS6	-	51935700	52027275
PT1_Y11.4	chr13	72178434	3'	+	72178645	211	intron	NM_004392	DACH1	-	72012097	72441330
PT4_Y12.2	chr13	73350565	3'	+	73350679	114	intron	NM_001128226	DIS3	-	73329539	73356344
PT1_Y0.2	chr13	77934462	3'	+	77934512	50	33285	NM_015057	MYCBP2	-	77618791	77901177
PT4_Y12.2	chr13	85917943	5'	-	85917877	66	448978	NM_032229	SLITRK6	-	86366921	86373483
PT1_Y0.2	chr13	99959986	3'	-	99959855	131	intron	NM_001144072	UBAC2	+	99852678	100038753
PT1_Y11.4	chr13	105793254	3'	-	105793216	38	318151	NR_040247	DAOA-AS1	+	106111405	106158030
PT1_Y11.4	chr13	108927255	3'	+	108927369	114	intron	NM_001145645	TNFSF13B	+	108921976	108960832
PT1_Y11.4	chr13	108927255	3'	+	108927336	81	intron	NM_001145645	TNFSF13B	+	108921976	108960832
PT1_Y11.4	chr13	108927255	3'	+	108927308	53	intron	NM_001145645	TNFSF13B	+	108921976	108960832
PT1_Y11.4	chr13	108927255	3'	+	108927301	46	intron	NM_001145645	TNFSF13B	+	108921976	108960832
PT1_Y11.4	chr13	108927260	5'	-	108927120	140	intron	NM_001145645	TNFSF13B	+	108921976	108960832
PT1_Y4.8	chr13	108927255	3'	+	108927291	36	intron	NM_001145645	TNFSF13B	+	108921976	108960832
PT1_Y4.8	chr13	108927260	5'	-	108927161	99	intron	NM_001145645	TNFSF13B	+	108921976	108960832
PT1_Y0.2	chr13	108927255	3'	+	108927548	293	intron	NM_001145645	TNFSF13B	+	108921976	108960832
PT1_Y0.2	chr13	108927255	3'	+	108927520	265	intron	NM_001145645	TNFSF13B	+	108921976	108960832
PT1_Y0.2	chr13	108927255	3'	+	108927498	243	intron	NM_001145645	TNFSF13B	+	108921976	108960832
PT1_Y0.2	chr13	108927255	3'	+	108927477	222	intron	NM_001145645	TNFSF13B	+	108921976	108960832
PT1_Y0.2	chr13	108927255	3'	+	108927353	98	intron	NM_001145645	TNFSF13B	+	108921976	108960832
PT1_Y0.2	chr13	108927255	3'	+	108927282	27	intron	NM_001145645	TNFSF13B	+	108921976	108960832
PT4_Y12.2	chr13	110639972	5'	+	110640180	208	161337	NM_001845	COL4A1	-	110801309	110959496
PT5_Y14.5	chr13	114901449	3'	-	114901282	167	3354	NM_007368	RASA3	-	114747193	114898095
PT3_Y7.2	chr14	21718225	3'	+	21718456	231	intron	NM_001077443	HNRNPC	-	21677295	21737638
PT1_Y11.4	chr14	21845014	3'	+	21845040	26	intron	NM_007192	SUPT16H	-	21819630	21852425
PT1_Y0.2	chr14	31387214	3'	-	31387177	37	intron	NM_001083893	STRN3	-	31363004	31495607
PT2_Y12.9	chr14	31397821	3'	-	31397736	85	intron	NM_001083893	STRN3	-	31363004	31495607
PT1_Y11.4	chr14	32592446	3'	+	32592572	126	intron	NM_001173	ARHGAP5	+	32546494	32628934
PT3_Y7.2	chr14	34660376	3'	+	34660433	57	240092	NM_022073	EGLN3	-	34393420	34420284
PT1_Y0.2	chr14	35357518	3'	+	35357661	143	12665	NM_013448	BAZ1A	-	35221936	35344853
PT1_Y0.2	chr14	35357523	5'	-	35357314	209	12670	NM_013448	BAZ1A	-	35221936	35344853
PT1_Y11.4	chr14	35685806	3'	-	35685717	89	intron	NM_014672	KIAA0391	+	35591775	35743270
PT1_Y11.4	chr14	39760983	3'	-	39760921	62	intron	NM_203354	CTAGE5	+	39734475	39820397
PT1_Y11.4	chr14	39760983	3'	-	39760941	42	intron	NM_203354	CTAGE5	+	39734475	39820397
PT1_Y4.8	chr14	39760983	3'	-	39760684	299	intron	NM_203354	CTAGE5	+	39734475	39820397
PT1_Y0.2	chr14	45622116	3'	+	45622277	161	intron	NM_020937	FANCM	+	45605135	45670093
PT1_Y0.2	chr14	50972868	5'	+	50972904	36	intron	NM_006575	MAP4K5	-	50885210	50999376
PT4_Y12.2	chr14	51242264	3'	-	51242170	94	intron	NM_020921	NIN	-	51186480	51297839
PT3_Y7.2	chr14	53124840	3'	+	53124973	133	intron	NM_014584	ERO1L	-	53108604	53162419
PT5_Y14.5	chr14	56809551	3'	+	56809736	185	41520	NM_021255	PELI2	+	56585092	56768031
PT1_Y11.4	chr14	58792867	3'	-	58792752	115	intron	NM_023001	ARID4A	+	58765221	58840451
PT1_Y11.4	chr14	58792867	3'	-	58792756	111	intron	NM_023001	ARID4A	+	58765221	58840451
PT1_Y4.8	chr14	62172337	5'	+	62172372	35	intron	NM_181054	HIF1A	+	62162118	62214977
PT1_Y11.4	chr14	64174669	3'	-	64174643	26	intron	NM_030791	SGPP1	-	64150934	64194756
PT1_Y11.4	chr14	64399969	3'	-	64399916	53	intron	NM_015180	SYNE2	+	64319682	64693167
PT1_Y0.2	chr14	64532112	5'	+	64532364	252	intron	NM_015180	SYNE2	+	64319682	64693167
PT5_Y14.5	chr14	65385774	3'	-	65385700	74	intron	NM_001204063	CHURC1	+	65381078	65402084
PT1_Y0.2	chr14	67785089	3'	-	67784907	182	intron	NM_022474	MPP5	+	67708020	67802536
PT1_Y0.2	chr14	67785084	5'	+	67785213	129	intron	NM_022474	MPP5	+	67708020	67802536
PT1_Y11.4	chr14	68441816	5'	+	68441899	83	intron	NM_002877	RAD51B	+	68286495	68944810
PT3_Y7.2	chr14	68756069	3'	+	68756133	64	intron	NM_002877	RAD51B	+	68286495	68944810
PT1_Y4.8	chr14	71394997	5'	-	71394953	44	intron	NM_014982	PCNX	+	71374121	71582099
PT5_Y14.5	chr14	71455378	3'	-	71455136	242	exon	NM_014982	PCNX	+	71374121	71582099
PT1_Y11.4	chr14	75606171	3'	-	75606044	127	intron	NM_006827	TMED10	-	75598170	75643349
PT1_Y0.2	chr14	75623893	5'	+	75624162	269	intron	NM_006827	TMED10	-	75598170	75643349
PT1_Y11.4	chr14	89834175	3'	+	89834196	21	intron	NM_005197	FOXN3	-	89622515	90085494
PT4_Y12.2	chr14	90159332	3'	-	90159278	54	73838	NM_005197	FOXN3	-	89622515	90085494

PT4_Y12.2	chr14	91387657	3'	-	91387490	167	intron	NM_004755	RPS6KA5	-	91337166	91526993
PT3_Y7.2	chr14	91578693	3'	+	91578994	301	1663	NM_001102368	C14orf159	+	91580356	91691703
PT1_Y11.4	chr14	91959896	5'	-	91959675	221	intron	NM_032560	SMEK1	-	91923955	91976644
PT1_Y11.4	chr14	91959896	5'	-	91959689	207	intron	NM_032560	SMEK1	-	91923955	91976644
PT3_Y7.2	chr14	92603958	3'	+	92604116	158	intron	NM_017437	CPSF2	+	92588297	92630543
PT1_Y11.4	chr14	95844543	3'	+	95844778	235	29060	NR_026779	NCRNA0034	-	95873603	95876427
PT1_Y11.4	chr14	97296489	5'	+	97296539	50	intron	NM_003384	VRK1	+	97263683	97347951
PT1_Y11.4	chr14	98084562	3'	-	98084509	53	14421	NR_033943	LOC1001295	-	98098983	98152995
PT1_Y11.4	chr14	99695552	3'	+	99696047	495	intron	NM_138576	BCL11B	-	99635624	99737822
PT1_Y11.4	chr14	99695552	3'	+	99695729	177	intron	NM_138576	BCL11B	-	99635624	99737822
PT1_Y0.2	chr14	100716907	3'	+	100717139	232	intron	NM_003403	YY1	+	100705101	100744804
PT3_Y0	chr14	102288207	5'	+	102288303	96	intron	NM_001161725	PPP2R5C	+	102228134	102378962
PT1_Y11.4	chr14	105527459	5'	+	105527809	350	intron	NM_013345	GPR132	-	105515736	105531754
PT3_Y7.2	chr15	33162703	3'	-	33162628	75	intron	NM_001103184	FMN1	-	33057746	33360085
PT1_Y0.2	chr15	35429463	3'	-	35429383	80	100063	NR_003144	LOC723972	+	35529526	35530264
PT1_Y11.4	chr15	39975096	3'	-	39974979	117	intron	NM_152597	FSIP1	-	39892231	40075039
PT1_Y11.4	chr15	39975096	3'	-	39975027	69	intron	NM_152597	FSIP1	-	39892231	40075039
PT1_Y11.4	chr15	39975091	5'	+	39975376	285	intron	NM_152597	FSIP1	-	39892231	40075039
PT1_Y11.4	chr15	39975091	5'	+	39975119	28	intron	NM_152597	FSIP1	-	39892231	40075039
PT1_Y11.4	chr15	39975096	3'	-	39975035	61	intron	NM_152597	FSIP1	-	39892231	40075039
PT1_Y0.2	chr15	39975096	3'	-	39974857	239	intron	NM_152597	FSIP1	-	39892231	40075039
PT1_Y0.2	chr15	39975096	3'	-	39974909	187	intron	NM_152597	FSIP1	-	39892231	40075039
PT1_Y0.2	chr15	39975096	3'	-	39975043	53	intron	NM_152597	FSIP1	-	39892231	40075039
PT1_Y0.2	chr15	39975091	5'	+	39975270	179	intron	NM_152597	FSIP1	-	39892231	40075039
PT1_Y0.2	chr15	39975091	5'	+	39975219	128	intron	NM_152597	FSIP1	-	39892231	40075039
PT1_Y0.2	chr15	40461684	5'	-	40461646	38	intron	NM_001211	BUB1B	+	40453209	40513337
PT3_Y7.2	chr15	40513337	3'	+	40513389	52	intron	NM_001128629	PAK6	+	40509628	40569688
PT1_Y4.8	chr15	41629593	3'	-	41629519	74	intron	NM_001243142	NUSAP1	+	41624891	41673248
PT1_Y11.4	chr15	41972653	5'	+	41972758	105	intron	NM_001164273	MGA	+	41952609	42062141
PT1_Y11.4	chr15	42031493	3'	-	42031106	387	intron	NM_001164273	MGA	+	41952609	42062141
PT5_Y14.5	chr15	42049142	3'	+	42049246	104	intron	NM_001164273	MGA	+	41952609	42062141
PT1_Y11.4	chr15	44907163	5'	-	44907058	105	intron	NM_025137	SPG11	-	44854893	44955876
PT1_Y11.4	chr15	44962782	3'	-	44962670	112	intron	NM_001145112	PATL2	-	44957929	44969086
PT1_Y4.8	chr15	44962782	3'	-	44962399	383	intron	NM_001145112	PATL2	-	44957929	44969086
PT1_Y4.8	chr15	44962777	5'	+	44962896	119	intron	NM_001145112	PATL2	-	44957929	44969086
PT1_Y4.8	chr15	44962777	5'	+	44962839	62	intron	NM_001145112	PATL2	-	44957929	44969086
PT1_Y0.2	chr15	49464553	5'	-	49464516	37	intron	NM_001001556	GALK2	+	49447975	49622002
PT1_Y11.4	chr15	50361227	5'	-	50361198	29	intron	NM_024837	ATP8B4	-	50150434	50411419
PT5_Y14.5	chr15	51218975	3'	+	51219000	25	intron	NM_007347	AP4E1	+	51200945	51298097
PT1_Y11.4	chr15	52435273	3'	+	52435356	83	intron	NM_016194	GNB5	-	52413122	52472162
PT1_Y11.4	chr15	52791355	3'	+	52791393	38	intron	NM_001142495	MYO5A	-	52599479	52821247
PT1_Y11.4	chr15	52894767	5'	-	52894502	265	intron	NM_019600	KIAA1370	-	52873517	52970820
PT1_Y11.4	chr15	52894767	5'	-	52894531	236	intron	NM_019600	KIAA1370	-	52873517	52970820
PT4_Y12.2	chr15	63422970	3'	+	63423125	155	intron	NM_171846	LACTB	+	63413998	63434260
PT1_Y11.4	chr15	63844687	3'	-	63844656	31	intron	NM_006537	USP3	+	63796809	63883663
PT1_Y0.2	chr15	63942897	5'	+	63942939	42	intron	NM_003922	HERC1	-	63900816	64126147
PT4_Y12.2	chr15	64230395	3'	+	64230445	50	intron	NM_014326	DAPK2	-	64199234	64338521
PT3_Y7.2	chr15	64594919	3'	-	64594831	88	intron	NM_022048	CSNK1G1	-	64457715	64648442
PT1_Y11.4	chr15	64631341	3'	+	64631476	135	intron	NM_022048	CSNK1G1	-	64457715	64648442
PT3_Y0	chr15	64654081	3'	+	64654146	65	3129	NM_001029989	KIAA0101	-	64657210	64673702
PT1_Y0.2	chr15	65454286	3'	-	65454101	185	intron	NM_006660	CLPX	-	65442783	65477563
PT1_Y11.4	chr15	65946301	3'	-	65945990	311	exon	NM_004727	SLC24A1	+	65914269	65948598
PT1_Y4.8	chr15	66070410	5'	-	66070239	171	intron	NM_001144823	DENND4A	-	65952956	66084631
PT1_Y11.4	chr15	66078199	3'	+	66078293	94	intron	NM_001144823	DENND4A	-	65952956	66084631
PT1_Y11.4	chr15	70413226	3'	-	70413171	55	22970	NM_005078	TLE3	-	70340542	70390256
PT1_Y11.4	chr15	72834938	3'	+	72834984	46	intron	NM_005744	ARIH1	+	72766666	72878896
PT3_Y7.2	chr15	73910706	3'	-	73910473	233	intron	NM_001161363	NPTN	-	73852343	73925753
PT2_Y12.9	chr15	74851830	3'	-	74851789	41	intron	NM_006465	ARID3B	+	74833547	74890472
PT1_Y0.2	chr15	75156768	5'	+	75156905	137	intron	NM_005697	SCAMP2	-	75137196	75165670
PT1_Y11.4	chr15	78336567	5'	-	78336402	165	intron	NM_144572	TBC1D2B	-	78287326	78369994
PT1_Y11.4	chr15	80385160	3'	-	80385096	64	intron	NM_001242917	ZFAND6	+	80351909	80430735
PT1_Y11.4	chr15	80385155	5'	+	80385252	97	intron	NM_001242917	ZFAND6	+	80351909	80430735
PT1_Y11.4	chr15	83861252	5'	+	83861606	354	intron	NM_016073	HDGFRP3	-	83806815	83876321
PT1_Y4.8	chr15	85161682	5'	-	85161365	317	1841	NM_181877	ZSCAN2	+	85144248	85159841
PT1_Y11.4	chr15	89815068	3'	+	89815270	202	intron	NM_018193	FANCI	+	89787193	89860362

PT1_Y11.4	chr15	89815073	5'	-	89814988	85	intron	NM_018193	FANCI	+	89787193	89860362
PT5_Y14.5	chr15	90935491	3'	+	90935584	93	intron	NM_003870	IQGAP1	+	90931472	91045475
PT5_Y14.5	chr15	90982148	3'	+	90982436	288	intron	NM_003870	IQGAP1	+	90931472	91045475
PT4_Y12.2	chr15	91085403	3'	-	91085321	82	intron	NM_022769	CRTC3	+	91073197	91188577
PT3_Y7.2	chr15	91087208	3'	-	91087133	75	intron	NM_022769	CRTC3	+	91073197	91188577
PT4_Y12.2	chr15	91115730	3'	+	91115788	58	intron	NM_022769	CRTC3	+	91073197	91188577
PT4_Y12.2	chr15	91293490	3'	-	91293336	154	intron	NM_000057	BLM	+	91260578	91358686
PT1_Y11.4	chr15	91334357	5'	+	91334507	150	intron	NM_000057	BLM	+	91260578	91358686
PT1_Y0.2	chr15	93360948	5'	-	93360828	120	20610	NR_033769	ASB9P1	+	93338713	93340338
PT1_Y11.4	chr16	482969	5'	-	482915	54	intron	NM_014700	RAB11FIP3	+	475667	572481
PT3_Y7.2	chr16	575296	3'	-	574842	454	1550	NR_024121	NCRNA0023	-	576846	577407
PT1_Y0.2	chr16	583593	3'	+	583631	38	intron	NM_005632	SOLH	+	577855	604636
PT1_Y11.4	chr16	708572	3'	-	708449	123	exon	NM_145294	WDR90	+	699362	717829
PT4_Y12.2	chr16	713724	3'	-	713580	144	intron	NM_145294	WDR90	+	699362	717829
PT2_Y12.9	chr16	1369875	3'	-	1369821	54	intron	NM_194261	UBE2I	+	1359153	1377019
PT2_Y12.9	chr16	1589240	3'	-	1589144	96	intron	NM_014714	IFT140	-	1560427	1662109
PT1_Y11.4	chr16	1737202	5'	+	1737296	94	intron	NM_144570	HN1L	+	1728277	1752073
PT1_Y11.4	chr16	1764209	5'	+	1764261	52	intron	NM_015133	MAPK8IP3	+	1756220	1820318
PT4_Y12.2	chr16	1874351	3'	+	1874473	122	intron	NM_001040427	HAGH	-	1859103	1877195
PT1_Y0.2	chr16	2126449	5'	-	2126286	163	intron	NM_000548	TSC2	+	2097989	2138713
PT4_Y12.2	chr16	2202409	3'	-	2202141	268	intron	NM_014353	RAB26	+	2198650	2204141
PT1_Y11.4	chr16	2308799	3'	-	2308714	85	intron	NM_006711	RNPS1	-	2303099	2318413
PT3_Y7.2	chr16	2757985	3'	+	2758046	61	exon	NM_018992	KCTD5	+	2732494	2759031
PT1_Y11.4	chr16	3022933	5'	-	3022626	307	exon	NM_152341	PAQR4	+	3019341	3023485
PT3_Y7.2	chr16	3676180	3'	+	3676507	327	14595	NM_032444	SLX4	-	3631183	3661585
PT3_Y7.2	chr16	3676180	3'	+	3676453	273	14595	NM_032444	SLX4	-	3631183	3661585
PT3_Y7.2	chr16	3676180	3'	+	3676329	149	14595	NM_032444	SLX4	-	3631183	3661585
PT3_Y7.2	chr16	3676180	3'	+	3676280	100	14595	NM_032444	SLX4	-	3631183	3661585
PT3_Y7.2	chr16	3676180	3'	+	3676231	51	14595	NM_032444	SLX4	-	3631183	3661585
PT1_Y11.4	chr16	3916211	5'	-	3916052	159	intron	NM_004380	CREBBP	-	3775055	3930121
PT1_Y11.4	chr16	3916211	5'	-	3916147	64	intron	NM_004380	CREBBP	-	3775055	3930121
PT1_Y11.4	chr16	3916206	3'	+	3916321	115	intron	NM_004380	CREBBP	-	3775055	3930121
PT1_Y11.4	chr16	3916211	5'	-	3916116	95	intron	NM_004380	CREBBP	-	3775055	3930121
PT1_Y11.4	chr16	4094604	3'	-	4094401	203	intron	NM_001116	ADCY9	-	4012649	4166186
PT1_Y11.4	chr16	11444836	3'	-	11444787	49	exon	NM_152308	RMI2	+	11439310	11445617
PT1_Y11.4	chr16	11755860	3'	-	11755840	20	6428	NM_003498	SNN	+	11762288	11773015
PT1_Y11.4	chr16	11858886	5'	-	11858806	80	intron	NM_014153	ZC3H7A	-	11844441	11891114
PT1_Y11.4	chr16	12784049	3'	+	12784231	182	intron	NM_001099455	CPPED1	-	12753655	12897744
PT1_Y11.4	chr16	12784054	5'	-	12783995	59	intron	NM_001099455	CPPED1	-	12753655	12897744
PT1_Y11.4	chr16	14304534	3'	+	14304600	66	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14304539	5'	-	14304403	136	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14304981	3'	+	14305081	100	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14304986	5'	-	14304793	193	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14304986	5'	-	14304898	88	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14304981	3'	+	14305125	144	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14305384	3'	+	14305409	25	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14305739	3'	+	14305767	28	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14307572	3'	+	14307679	107	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14307614	3'	+	14307733	119	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14307633	3'	+	14308143	510	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14307633	3'	+	14307983	350	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14307633	3'	+	14307966	333	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14307633	3'	+	14307938	305	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14307633	3'	+	14307907	274	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14307633	3'	+	14307901	268	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14307633	3'	+	14307889	256	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14307633	3'	+	14307881	248	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14307633	3'	+	14307854	221	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14307633	3'	+	14307844	211	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14307633	3'	+	14307838	205	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14307633	3'	+	14307820	187	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14307633	3'	+	14307789	156	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14307633	3'	+	14307778	145	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14307638	5'	-	14307289	349	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14307638	5'	-	14307531	107	intron	NM_014048	MKL2	+	14165195	14360630

PT1_Y11.4	chr16	14307638	5'	-	14307587	51	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14307638	5'	-	14307591	47	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14307638	5'	-	14307597	41	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14307638	5'	-	14307603	35	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14307633	3'	+	14307816	183	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14307638	5'	-	14307590	48	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14307670	5'	-	14307477	193	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14307670	5'	-	14307494	176	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14307670	5'	-	14307611	59	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14307781	5'	-	14307571	210	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14308320	5'	-	14308074	246	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14308320	5'	-	14308156	164	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14308320	5'	-	14308220	100	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14308320	5'	-	14308275	45	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14308320	5'	-	14308285	35	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14308320	5'	-	14308201	119	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14308336	5'	-	14308121	215	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14308826	3'	+	14309049	223	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14308826	3'	+	14308952	126	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14308826	3'	+	14308896	70	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14308826	3'	+	14308879	53	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14308826	3'	+	14308872	46	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14308826	3'	+	14308861	35	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14308831	5'	-	14308790	41	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14308831	5'	-	14308799	32	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14308831	5'	-	14308469	362	intron	NM_014048	MKL2	+	14165195	14360630
PT4_Y12.2	chr16	14309457	5'	-	14309383	74	intron	NM_014048	MKL2	+	14165195	14360630
PT4_Y12.2	chr16	14309457	5'	-	14309396	61	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310200	3'	+	14307837	2363	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310200	3'	+	14310537	337	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310200	3'	+	14310484	284	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310200	3'	+	14310429	229	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310200	3'	+	14310406	206	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310200	3'	+	14310374	174	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310200	3'	+	14310364	164	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310200	3'	+	14310354	154	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310200	3'	+	14310338	138	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310200	3'	+	14310332	132	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310200	3'	+	14310324	124	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310200	3'	+	14310317	117	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310200	3'	+	14310304	104	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310200	3'	+	14310297	97	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310200	3'	+	14310290	90	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310200	3'	+	14310269	69	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310200	3'	+	14310242	42	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310200	3'	+	14310229	29	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310205	5'	-	14309914	291	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310205	5'	-	14309943	262	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310205	5'	-	14309976	229	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310205	5'	-	14310013	192	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310205	5'	-	14310021	184	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310205	5'	-	14310025	180	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310205	5'	-	14310034	171	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310205	5'	-	14310038	167	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310205	5'	-	14310056	149	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310205	5'	-	14310074	131	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310205	5'	-	14310078	127	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310205	5'	-	14310087	118	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310205	5'	-	14310093	112	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310205	5'	-	14310113	92	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310205	5'	-	14310120	85	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310205	5'	-	14310124	81	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310205	5'	-	14310133	72	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310205	5'	-	14310139	66	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310205	5'	-	14310146	59	intron	NM_014048	MKL2	+	14165195	14360630



PT1_Y11.4	chr16	14310205	5'	-	14310161	44	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310205	5'	-	14310170	35	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310205	5'	-	14310174	31	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310205	5'	-	14310180	25	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310200	3'	+	14310697	497	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310200	3'	+	14310412	212	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310200	3'	+	14310350	150	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310200	3'	+	14310334	134	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310200	3'	+	14310257	57	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310205	5'	-	14310089	116	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310205	5'	-	14310115	90	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310395	3'	+	14310651	256	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310395	3'	+	14310526	131	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310395	3'	+	14310521	126	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310395	3'	+	14310452	57	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310400	5'	-	14310246	154	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310400	5'	-	14310285	115	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310400	5'	-	14310321	79	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310400	5'	-	14310356	44	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310400	5'	-	14310366	34	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310589	3'	+	14310915	326	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310589	3'	+	14310782	193	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310589	3'	+	14310700	111	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310589	3'	+	14310691	102	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310589	3'	+	14310673	84	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310594	5'	-	14310444	150	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310594	5'	-	14310448	146	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310594	5'	-	14310452	142	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310594	5'	-	14310474	120	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310594	5'	-	14310501	93	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14310594	5'	-	14310514	80	intron	NM_014048	MKL2	+	14165195	14360630
PT1_Y11.4	chr16	14681609	3'	-	14681372	237	intron	NM_001134477	PARN	-	14529556	14724128
PT5_Y14.5	chr16	15738248	3'	-	15738164	84	intron	NM_001143979	NDE1	-	15737123	15820208
PT1_Y11.4	chr16	18831875	5'	-	18831839	36	intron	NM_015092	SMG1	-	18816174	18937726
PT1_Y0.2	chr16	18839551	3'	-	18839405	146	intron	NM_015092	SMG1	-	18816174	18937726
PT5_Y14.5	chr16	21977026	3'	-	21976638	388	intron	NM_003366	UQCRC2	+	21964608	21994668
PT5_Y14.5	chr16	21977026	3'	-	21976925	101	intron	NM_003366	UQCRC2	+	21964608	21994668
PT4_Y12.2	chr16	23475831	3'	+	23475911	80	exon	NM_015044	GGA2	-	23474862	23521815
PT2_Y12.9	chr16	23860008	3'	-	23859795	213	intron	NM_002738	PRKCB	+	23847299	24231932
PT3_Y7.2	chr16	23946910	3'	+	23947154	244	intron	NM_002738	PRKCB	+	23847299	24231932
PT1_Y0.2	chr16	24026618	3'	+	24026786	168	intron	NM_002738	PRKCB	+	23847299	24231932
PT1_Y0.2	chr16	24026618	3'	+	24026716	98	intron	NM_002738	PRKCB	+	23847299	24231932
PT1_Y11.4	chr16	24144986	3'	-	24144797	189	intron	NM_002738	PRKCB	+	23847299	24231932
PT1_Y11.4	chr16	24144986	3'	-	24144811	175	intron	NM_002738	PRKCB	+	23847299	24231932
PT1_Y11.4	chr16	24562540	3'	-	24562459	81	1818	NM_006910	RBBP6	+	24550907	24560722
PT3_Y7.2	chr16	24992612	3'	-	24992461	151	intron	NM_018054	ARHGAP17	-	24930711	25026675
PT1_Y11.4	chr16	29726370	3'	+	29726419	49	17056	NM_014298	QPRT	+	29690440	29709314
PT5_Y14.5	chr16	30549085	3'	+	30549204	119	2891	NM_023931	ZNF747	-	30542778	30546194
PT1_Y11.4	chr16	30611843	3'	-	30611478	365	2856	NM_138447	ZNF689	-	30614699	30621682
PT1_Y11.4	chr16	30611843	3'	-	30611801	42	2856	NM_138447	ZNF689	-	30614699	30621682
PT1_Y11.4	chr16	30611838	5'	+	30612259	421	2861	NM_138447	ZNF689	-	30614699	30621682
PT2_Y12.9	chr16	30632935	3'	-	30632751	184	11253	NM_138447	ZNF689	-	30614699	30621682
PT1_Y0.2	chr16	31131388	3'	-	31131254	134	intron	NM_032188	KAT8	+	31128984	31142714
PT1_Y11.4	chr16	31403841	5'	-	31403564	277	791	NM_005353	ITGAD	+	31404632	31437826
PT1_Y11.4	chr16	31740868	3'	-	31740791	77	intron	NM_001130913	ZNF720	+	31724549	31772886
PT3_Y7.2	chr16	31753282	3'	+	31753310	28	intron	NM_001130913	ZNF720	+	31724549	31772886
PT1_Y11.4	chr16	31900036	3'	-	31899955	81	intron	NM_003414	ZNF267	+	31885078	31928627
PT5_Y14.5	chr16	47538351	3'	-	47538316	35	intron	NM_000293	PHKB	+	47495209	47735434
PT1_Y0.2	chr16	48316018	3'	-	48315901	117	intron	NM_031490	LONP2	+	48278210	48387407
PT1_Y0.2	chr16	48316013	5'	+	48316142	129	intron	NM_031490	LONP2	+	48278210	48387407
PT1_Y11.4	chr16	48592656	5'	+	48592761	105	intron	NM_153029	N4BP1	-	48572636	48644120
PT4_Y12.2	chr16	48621036	3'	+	48621081	45	intron	NM_153029	N4BP1	-	48572636	48644120
PT4_Y12.2	chr16	50352524	3'	+	50352567	43	404	NM_001173984	BRD7	-	50352928	50402845
PT1_Y11.4	chr16	50794055	3'	-	50793634	421	intron	NM_015247	CYLD	+	50775960	50835846
PT1_Y0.2	chr16	50810260	3'	+	50810377	117	intron	NM_015247	CYLD	+	50775960	50835846

PT1_Y11.4	chr16	50818659	5'	+	50818697	38	intron	NM_015247	CYLD	+	50775960	50835846
PT1_Y0.2	chr16	53300580	5'	-	53300538	42	intron	NM_025134	CHD9	+	53088944	53361414
PT3_Y7.2	chr16	53488566	3'	+	53488595	29	intron	NM_005611	RBL2	+	53468350	53525560
PT1_Y0.2	chr16	53511739	3'	-	53511704	35	intron	NM_005611	RBL2	+	53468350	53525560
PT3_Y7.2	chr16	56248982	3'	-	56248910	72	intron	NM_020988	GNAO1	+	56225250	56382111
PT1_Y11.4	chr16	56971954	3'	-	56971895	59	intron	NM_014685	HERPUD1	+	56965747	56977793
PT1_Y11.4	chr16	57030648	5'	-	57030506	142	intron	NM_032206	NLRC5	+	57023409	57117436
PT1_Y11.4	chr16	57030648	5'	-	57030480	168	intron	NM_032206	NLRC5	+	57023409	57117436
PT1_Y0.2	chr16	57030648	5'	-	57030168	480	intron	NM_032206	NLRC5	+	57023409	57117436
PT3_Y7.2	chr16	66592761	3'	-	66592465	296	intron	NM_016326	CKLF	+	66586465	66600190
PT1_Y11.4	chr16	67066122	3'	-	67065998	124	intron	NM_022845	CBFB	+	67063049	67134958
PT1_Y11.4	chr16	67098530	3'	+	67098704	174	intron	NM_022845	CBFB	+	67063049	67134958
PT3_Y7.2	chr16	67191371	3'	-	67191250	121	intron	NM_003789	TRADD	-	67188088	67193812
PT1_Y11.4	chr16	67602189	3'	-	67602123	66	intron	NM_006565	CTCF	+	67596309	67673088
PT1_Y11.4	chr16	67622138	5'	+	67622259	121	intron	NM_006565	CTCF	+	67596309	67673088
PT3_Y7.2	chr16	67641825	3'	-	67641700	125	intron	NM_006565	CTCF	+	67596309	67673088
PT1_Y11.4	chr16	67740024	3'	+	67740288	264	intron	NR_027398	GFOD2	-	67708435	67753273
PT1_Y11.4	chr16	68130647	5'	+	68130725	78	intron	NM_173163	NFATC3	+	68119268	68263162
PT4_Y12.2	chr16	68130899	3'	-	68130568	331	intron	NM_173163	NFATC3	+	68119268	68263162
PT4_Y12.2	chr16	68130899	3'	-	68130643	256	intron	NM_173163	NFATC3	+	68119268	68263162
PT4_Y12.2	chr16	68130894	5'	+	68131129	235	intron	NM_173163	NFATC3	+	68119268	68263162
PT4_Y12.2	chr16	68130894	5'	+	68131045	151	intron	NM_173163	NFATC3	+	68119268	68263162
PT4_Y12.2	chr16	68130894	5'	+	68130994	100	intron	NM_173163	NFATC3	+	68119268	68263162
PT1_Y11.4	chr16	68133605	3'	-	68133555	50	intron	NM_173163	NFATC3	+	68119268	68263162
PT1_Y11.4	chr16	68302577	3'	-	68302239	338	intron	NM_001076785	SLC7A6	+	68298418	68335726
PT1_Y11.4	chr16	68520792	5'	+	68520867	75	38383	NM_018667	SMPD3	-	68392229	68482409
PT3_Y0	chr16	68595792	3'	-	68595739	53	intron	NM_133458	ZFP90	+	68573660	68601039
PT1_Y11.4	chr16	69254834	3'	-	69254729	105	intron	NM_006750	SNTB2	+	69221049	69342955
PT1_Y11.4	chr16	69474136	5'	+	69474158	22	intron	NM_030579	CYB5B	+	69458497	69500167
PT1_Y11.4	chr16	69614624	5'	+	69614737	113	intron	NM_006599	NFAT5	+	69599868	69729591
PT1_Y11.4	chr16	69634065	5'	-	69633810	255	intron	NM_006599	NFAT5	+	69599868	69729591
PT1_Y11.4	chr16	69634061	3'	+	69634162	101	intron	NM_006599	NFAT5	+	69599868	69729591
PT3_Y7.2	chr16	69683881	3'	+	69683945	64	intron	NM_006599	NFAT5	+	69599868	69729591
PT5_Y14.5	chr16	70164167	3'	+	70164229	62	intron	NM_017990	PDPR	+	70147528	70195184
PT1_Y11.4	chr16	71936703	5'	+	71936876	173	intron	NM_014761	KIAA0174	+	71929445	71962906
PT3_Y7.2	chr16	75078944	3'	-	75078891	53	intron	NM_032268	ZNRF1	+	75032914	75144892
PT1_Y11.4	chr16	83022343	5'	+	83022363	20	intron	NM_001257	CDH13	+	82660398	83214630
PT4_Y12.2	chr16	84764959	3'	+	84765156	197	intron	NM_005153	USP10	+	84733554	84813527
PT3_Y7.2	chr16	85951111	3'	-	85950843	268	intron	NM_002163	IRF8	+	85932773	85956211
PT1_Y11.4	chr16	87814835	3'	-	87814784	51	15237	NM_017566	KLHDC4	-	87741417	87799598
PT1_Y0.2	chr16	88650104	5'	-	88649916	188	intron	NM_144604	ZC3H18	+	88636788	88698372
PT1_Y11.4	chr16	88652099	3'	+	88652379	280	intron	NM_144604	ZC3H18	+	88636788	88698372
PT5_Y14.5	chr16	88867585	3'	-	88867546	39	2600	NM_030928	CDT1	+	88870185	88875666
PT3_Y7.2	chr16	89176532	3'	+	89176589	57	intron	NM_001127214	ACSF3	+	89160253	89220996
PT1_Y0.2	chr16	89196309	3'	-	89196110	199	intron	NM_001127214	ACSF3	+	89160253	89220996
PT1_Y11.4	chr16	89384848	5'	-	89384742	106	intron	NM_013275	ANKRD11	-	89334034	89556969
PT1_Y11.4	chr16	89799982	3'	+	89800048	66	intron	NM_152287	ZNF276	+	89787392	89807332
PT1_Y11.4	chr16	89870049	3'	+	89870186	137	intron	NM_000135	FANCA	-	89803958	89883065
PT5_Y14.5	chr16	89934449	3'	+	89934560	111	intron	NM_032451	SPIRE2	+	89894906	89937727
PT1_Y4.8	chr17	2506886	3'	-	2506779	107	intron	NM_000430	PAFAH1B1	+	2496922	2588909
PT4_Y12.2	chr17	4130306	3'	+	4130355	49	intron	NM_016376	ANKFY1	-	4066664	4167274
PT1_Y11.4	chr17	4179112	5'	-	4178846	266	intron	NM_003342	UBE2G1	-	4172511	4269969
PT3_Y7.2	chr17	4192884	3'	+	4193009	125	intron	NM_003342	UBE2G1	-	4172511	4269969
PT1_Y11.4	chr17	4222038	5'	-	4221809	229	intron	NM_003342	UBE2G1	-	4172511	4269969
PT1_Y11.4	chr17	4286094	3'	-	4286036	58	16125	NM_003342	UBE2G1	-	4172511	4269969
PT1_Y11.4	chr17	4384982	3'	-	4384914	68	intron	NM_182538	SPNS3	+	4337218	4391499
PT3_Y7.2	chr17	4596357	3'	+	4596611	254	intron	NM_014389	PELP1	-	4574678	4607632
PT3_Y7.2	chr17	4596357	3'	+	4596465	108	intron	NM_014389	PELP1	-	4574678	4607632
PT1_Y11.4	chr17	4866623	3'	-	4866600	23	intron	NM_004890	SPAG7	-	4862520	4871132
PT1_Y11.4	chr17	5412334	3'	-	5412265	69	intron	NM_001033053	NLRP1	-	5404718	5487832
PT1_Y11.4	chr17	6667842	3'	-	6667730	112	intron	NM_199139	XAF1	+	6659155	6678964
PT4_Y12.2	chr17	7158160	3'	-	7158088	72	intron	NM_203415	C17orf81	+	7155371	7163259
PT1_Y11.4	chr17	7177955	3'	-	7177906	49	7098	NM_001042	SLC2A4	+	7185053	7191367
PT1_Y11.4	chr17	7274508	3'	-	7274385	123	9856	NM_003985	TNK1	+	7284364	7293092
PT1_Y11.4	chr17	7394577	3'	-	7394401	176	intron	NM_000937	POLR2A	+	7387697	7417935

PT4_Y12.2	chr17	7396401	3'	-	7396350	51	intron	NM_000937	POLR2A	+	7387697	7417935
PT1_Y11.4	chr17	7750774	5'	+	7750984	210	intron	NM_001080424	KDM6B	+	7743234	7758118
PT2_Y12.9	chr17	14002198	3'	-	14002109	89	intron	NM_001303	COX10	+	13972718	14111996
PT1_Y11.4	chr17	15992500	3'	+	15992672	172	intron	NM_006311	NCOR1	-	15933407	16097953
PT1_Y11.4	chr17	15995893	3'	-	15995778	115	intron	NM_006311	NCOR1	-	15933407	16097953
PT1_Y11.4	chr17	15995893	3'	-	15995830	63	intron	NM_006311	NCOR1	-	15933407	16097953
PT3_Y7.2	chr17	16970031	3'	-	16969858	173	intron	NM_015134	MPRIIP	+	16946073	17095962
PT1_Y11.4	chr17	17832995	5'	+	17833149	154	intron	NM_001082968	TOM1L2	-	17746821	17875784
PT5_Y14.5	chr17	18185166	3'	+	18185221	55	intron	NM_004618	TOP3A	-	18177234	18218321
PT1_Y11.4	chr17	19767334	3'	+	19767641	307	intron	NM_001142610	ULK2	-	19674142	19771239
PT1_Y0.2	chr17	25805204	3'	-	25805066	138	intron	NM_014238	KSR1	+	25799035	25950718
PT1_Y11.4	chr17	26372648	5'	+	26372723	75	intron	NM_016231	NLK	+	26369687	26523404
PT3_Y7.2	chr17	26374745	3'	+	26374811	66	intron	NM_016231	NLK	+	26369687	26523404
PT1_Y11.4	chr17	26492393	5'	+	26492807	414	intron	NM_016231	NLK	+	26369687	26523404
PT3_Y7.2	chr17	27222272	3'	+	27222437	165	intron	NM_004475	FLOT2	-	27206356	27224715
PT1_Y11.4	chr17	27766731	3'	+	27766776	45	intron	NM_020791	TAOK1	+	27717942	27878921
PT1_Y11.4	chr17	27766736	5'	-	27766705	31	intron	NM_020791	TAOK1	+	27717942	27878921
PT1_Y11.4	chr17	27816579	5'	+	27816692	113	intron	NM_020791	TAOK1	+	27717942	27878921
PT1_Y11.4	chr17	27828819	5'	-	27828452	367	intron	NM_020791	TAOK1	+	27717942	27878921
PT1_Y11.4	chr17	27828819	5'	-	27828763	56	intron	NM_020791	TAOK1	+	27717942	27878921
PT1_Y11.4	chr17	27877739	3'	-	27877692	47	exon	NM_020791	TAOK1	+	27717942	27878921
PT1_Y11.4	chr17	27877740	3'	-	27877689	51	exon	NM_020791	TAOK1	+	27717942	27878921
PT1_Y11.4	chr17	27877735	5'	+	27877872	137	exon	NM_020791	TAOK1	+	27717942	27878921
PT1_Y11.4	chr17	28022895	3'	+	28022916	21	intron	NM_033389	SSH2	-	27952964	28257018
PT1_Y11.4	chr17	28166950	5'	-	28166820	130	intron	NM_033389	SSH2	-	27952964	28257018
PT1_Y11.4	chr17	28166950	5'	-	28166827	123	intron	NM_033389	SSH2	-	27952964	28257018
PT1_Y11.4	chr17	28506782	3'	-	28506635	147	intron	NM_032141	NSRP1	+	28443833	28513486
PT1_Y11.4	chr17	28506782	3'	-	28506651	131	intron	NM_032141	NSRP1	+	28443833	28513486
PT1_Y11.4	chr17	28506777	5'	+	28507020	243	intron	NM_032141	NSRP1	+	28443833	28513486
PT1_Y11.4	chr17	28506777	5'	+	28506861	84	intron	NM_032141	NSRP1	+	28443833	28513486
PT1_Y11.4	chr17	28506777	5'	+	28506807	30	intron	NM_032141	NSRP1	+	28443833	28513486
PT1_Y11.4	chr17	28506777	5'	+	28506859	82	intron	NM_032141	NSRP1	+	28443833	28513486
PT1_Y11.4	chr17	28748473	5'	-	28748264	209	intron	NM_001304	CPD	+	28705941	28796675
PT3_Y7.2	chr17	29580861	3'	+	29580995	134	31079	NM_001042492	NF1	+	29421944	29549782
PT1_Y11.4	chr17	29593635	5'	-	29593569	66	28032	NM_002544	OMG	-	29621667	29624380
PT1_Y11.4	chr17	30326604	5'	-	30326569	35	exon	NM_015355	SUZ12	+	30264043	30328057
PT1_Y11.4	chr17	33573066	5'	+	33573188	122	intron	NM_144975	SLFN5	+	33570085	33594761
PT4_Y12.2	chr17	33744810	3'	-	33744741	69	intron	NM_018042	SLFN12	-	33738080	33759543
PT1_Y0.2	chr17	33836299	3'	-	33836055	244	21541	NM_001195790	SLFN12L	-	33801941	33814758
PT5_Y14.5	chr17	33947964	3'	+	33947990	26	intron	NM_001282	AP2B1	+	33914281	34053436
PT5_Y14.5	chr17	33949754	3'	-	33949666	88	intron	NM_001282	AP2B1	+	33914281	34053436
PT5_Y14.5	chr17	34147364	3'	-	34147227	137	exon	NM_003487	TAF15	+	34136487	34174237
PT1_Y11.4	chr17	35983574	5'	+	35983635	61	intron	NM_007010	DDX52	-	35972362	36003493
PT3_Y7.2	chr17	36944412	3'	+	36944423	231	intron	NM_003559	PIP4K2B	-	36921943	36956158
PT1_Y0.2	chr17	37039967	3'	-	37039913	54	intron	NM_006148	LASP1	+	37026111	37078023
PT3_Y7.2	chr17	37685987	3'	-	37685876	111	intron	NM_015083	CDK12	+	37617738	37690800
PT1_Y11.4	chr17	37959219	3'	+	37959467	248	intron	NM_012481	IKZF3	-	37921198	38020441
PT3_Y7.2	chr17	37960976	3'	+	37961147	171	intron	NM_012481	IKZF3	-	37921198	38020441
PT5_Y14.5	chr17	37988486	3'	-	37988340	146	intron	NM_012481	IKZF3	-	37921198	38020441
PT1_Y11.4	chr17	38018130	3'	+	38018195	65	intron	NM_012481	IKZF3	-	37921198	38020441
PT1_Y0.2	chr17	38389928	5'	-	38389786	142	intron	NM_133264	WIPF2	+	38375573	38438439
PT1_Y0.2	chr17	38561073	5'	+	38561171	98	exon	NM_001067	TOP2A	-	38544772	38574202
PT1_Y11.4	chr17	38753624	3'	+	38753648	24	30351	NM_003079	SMARCE1	-	38783975	38804103
PT1_Y11.4	chr17	38753629	5'	-	38753518	111	30346	NM_003079	SMARCE1	-	38783975	38804103
PT1_Y11.4	chr17	38753629	5'	-	38753555	74	30346	NM_003079	SMARCE1	-	38783975	38804103
PT3_Y0	chr17	38792898	3'	+	38793099	201	intron	NM_003079	SMARCE1	-	38783975	38804103
PT3_Y7.2	chr17	38793595	3'	+	38793828	233	intron	NM_003079	SMARCE1	-	38783975	38804103
PT3_Y7.2	chr17	38793595	3'	+	38793698	103	intron	NM_003079	SMARCE1	-	38783975	38804103
PT5_Y14.5	chr17	38799819	3'	-	38799592	227	intron	NM_003079	SMARCE1	-	38783975	38804103
PT1_Y11.4	chr17	39006596	5'	-	39006430	166	10833	NM_000223	KRT12	-	39017429	39023462
PT5_Y14.5	chr17	39494142	3'	-	39494006	136	8228	NM_004138	KRT33A	-	39502370	39507056
PT1_Y11.4	chr17	39574330	3'	+	39574456	126	2478	NM_003770	KRT37	-	39576808	39580822
PT4_Y12.2	chr17	40006638	3'	-	40006450	188	2039	NM_152467	KLHL10	+	39994042	40004599
PT1_Y11.4	chr17	40145089	3'	-	40144885	204	intron	NR_029431	DNAJC7	-	40128438	40169183
PT1_Y11.4	chr17	40152722	5'	+	40152912	190	intron	NR_029431	DNAJC7	-	40128438	40169183

PT1_Y11.4	chr17	40152722	5'	+	40152905	183	intron	NR_029431	DNAJC7	-	40128438	40169183
PT1_Y11.4	chr17	40152722	5'	+	40152824	102	intron	NR_029431	DNAJC7	-	40128438	40169183
PT1_Y11.4	chr17	40152722	5'	+	40152762	40	intron	NR_029431	DNAJC7	-	40128438	40169183
PT4_Y12.2	chr17	40384798	3'	-	40384752	46	intron	NM_012448	STAT5B	-	40351194	40428424
PT1_Y11.4	chr17	40394733	3'	-	40394569	164	intron	NM_012448	STAT5B	-	40351194	40428424
PT5_Y14.5	chr17	40404547	3'	-	40404276	271	intron	NM_012448	STAT5B	-	40351194	40428424
PT4_Y12.2	chr17	40404703	3'	-	40404330	373	intron	NM_012448	STAT5B	-	40351194	40428424
PT4_Y12.2	chr17	40404703	3'	-	40404522	181	intron	NM_012448	STAT5B	-	40351194	40428424
PT4_Y12.2	chr17	40404703	3'	-	40404615	88	intron	NM_012448	STAT5B	-	40351194	40428424
PT5_Y14.5	chr17	40414129	3'	-	40414092	37	intron	NM_012448	STAT5B	-	40351194	40428424
PT5_Y14.5	chr17	40417846	3'	+	40417942	96	intron	NM_012448	STAT5B	-	40351194	40428424
PT3_Y0	chr17	40420937	3'	+	40421117	180	intron	NM_012448	STAT5B	-	40351194	40428424
PT1_Y11.4	chr17	40421408	3'	+	40421521	113	intron	NM_012448	STAT5B	-	40351194	40428424
PT1_Y11.4	chr17	40421711	3'	+	40421951	240	intron	NM_012448	STAT5B	-	40351194	40428424
PT1_Y11.4	chr17	40421711	3'	+	40421939	228	intron	NM_012448	STAT5B	-	40351194	40428424
PT1_Y11.4	chr17	40421711	3'	+	40421885	174	intron	NM_012448	STAT5B	-	40351194	40428424
PT1_Y11.4	chr17	40421711	3'	+	40421879	168	intron	NM_012448	STAT5B	-	40351194	40428424
PT1_Y11.4	chr17	40421711	3'	+	40421822	111	intron	NM_012448	STAT5B	-	40351194	40428424
PT1_Y11.4	chr17	40421711	3'	+	40421763	52	intron	NM_012448	STAT5B	-	40351194	40428424
PT1_Y0.2	chr17	40421711	3'	+	40421800	89	intron	NM_012448	STAT5B	-	40351194	40428424
PT3_Y7.2	chr17	40426483	3'	+	40426542	59	intron	NM_012448	STAT5B	-	40351194	40428424
PT1_Y0.2	chr17	40507103	5'	+	40507544	441	intron	NM_003150	STAT3	-	40465342	40540405
PT1_Y11.4	chr17	40508544	5'	-	40508485	59	intron	NM_003150	STAT3	-	40465342	40540405
PT1_Y11.4	chr17	40508548	5'	-	40508483	65	intron	NM_003150	STAT3	-	40465342	40540405
PT1_Y11.4	chr17	40516545	3'	-	40516164	381	intron	NM_003150	STAT3	-	40465342	40540405
PT1_Y11.4	chr17	41237572	5'	-	41237361	211	intron	NM_007298	BRCA1	-	41196311	41277340
PT3_Y0	chr17	41318325	3'	+	41318384	59	4172	NM_031862	NBR1	+	41322497	41363707
PT4_Y12.2	chr17	41576726	3'	-	41576665	61	intron	NM_004941	DHX8	+	41561333	41601680
PT1_Y11.4	chr17	42536355	3'	+	42536513	158	intron	NM_001002909	GPATCH8	-	42472644	42580957
PT1_Y11.4	chr17	43235665	3'	+	43235846	181	2598	NM_144608	HEXIM2	+	43238263	43247406
PT5_Y14.5	chr17	43482547	3'	+	43482603	56	intron	NM_199282	ARHGAP27	-	43471267	43510282
PT1_Y4.8	chr17	44126355	5'	-	44126208	147	intron	NM_001193466	KIAA1267	-	44107281	44302740
PT1_Y11.4	chr17	44149772	5'	+	44149942	170	intron	NM_001193466	KIAA1267	-	44107281	44302740
PT1_Y0.2	chr17	44176870	3'	-	44176777	93	intron	NM_001193466	KIAA1267	-	44107281	44302740
PT1_Y0.2	chr17	45468901	3'	-	45468859	42	exon	NM_152347	C17orf57	+	45401326	45508076
PT1_Y11.4	chr17	46385058	3'	+	46385192	134	intron	NM_003726	SKAP1	-	46210801	46507594
PT3_Y7.2	chr17	47403627	3'	+	47403913	286	intron	NM_014897	ZNF652	-	47366567	47439476
PT3_Y7.2	chr17	47481232	3'	+	47481406	174	187	NM_002634	PHB	-	47481419	47492242
PT3_Y0	chr17	47709840	3'	-	47709810	30	intron	NM_003563	SPOP	-	47676245	47755525
PT1_Y0.2	chr17	47793802	5'	+	47793873	71	intron	NM_030802	FAM117A	-	47787686	47841518
PT5_Y14.5	chr17	48937908	3'	-	48937706	202	1678	NM_005749	TOB1	-	48939586	48941413
PT1_Y4.8	chr17	49324526	3'	-	49324345	181	intron	NM_017643	MBTD1	-	49254785	49337427
PT1_Y11.4	chr17	50595907	3'	+	50596020	113	358746	NM_020178	CA10	-	49707673	50237161
PT1_Y11.4	chr17	56080489	5'	-	56080359	130	exon	NM_006924	SRSF1	-	56078279	56084707
PT1_Y11.4	chr17	56080489	5'	-	56080372	117	exon	NM_006924	SRSF1	-	56078279	56084707
PT3_Y7.2	chr17	56223012	3'	-	56222981	31	9502	NM_012374	OR4D1	+	56232514	56233447
PT4_Y12.2	chr17	56638520	3'	-	56638404	116	intron	NM_001201457	TEX14	-	56634037	56769416
PT1_Y11.4	chr17	57174268	5'	-	57174149	119	intron	NM_001005207	TRIM37	-	57059999	57184266
PT1_Y11.4	chr17	57876956	5'	+	57877116	160	intron	NM_030938	VMP1	+	57784862	57917952
PT1_Y11.4	chr17	57876956	5'	+	57877092	136	intron	NM_030938	VMP1	+	57784862	57917952
PT4_Y12.2	chr17	60044806	3'	+	60044941	135	intron	NM_005121	MED13	-	60019965	60142643
PT1_Y11.4	chr17	62141029	3'	-	62140906	123	intron	NM_001433	ERN1	-	62120389	62207502
PT1_Y11.4	chr17	62141029	3'	-	62140912	117	intron	NM_001433	ERN1	-	62120389	62207502
PT3_Y0	chr17	62523069	3'	-	62522759	310	intron	NM_138363	CEP95	+	62503157	62534062
PT1_Y0.2	chr17	65094293	3'	-	65094151	142	intron	NM_014877	HELZ	-	65066553	65241319
PT3_Y7.2	chr17	65386003	3'	-	65385824	179	intron	NM_181671	PITPNC1	+	65373923	65689647
PT4_Y12.2	chr17	66524287	3'	-	66523960	327	intron	NM_212471	PRKAR1A	+	66508109	66528910
PT1_Y11.4	chr17	72751128	3'	+	72751191	63	intron	NM_004252	SLC9A3R1	+	72744762	72765499
PT1_Y11.4	chr17	73144870	3'	+	73144947	77	intron	NM_016185	HN1	-	73131343	73150774
PT4_Y12.2	chr17	73388549	3'	+	73388640	91	intron	NM_002086	GRB2	-	73314156	73401790
PT1_Y11.4	chr17	73398318	3'	+	73398590	272	intron	NM_002086	GRB2	-	73314156	73401790
PT3_Y7.2	chr17	73458571	3'	+	73458631	60	intron	NM_014738	KIAA0195	+	73452663	73496533
PT1_Y11.4	chr17	73480401	3'	-	73480291	110	intron	NM_014738	KIAA0195	+	73452663	73496533
PT3_Y7.2	chr17	73825137	3'	-	73824628	509	intron	NM_199242	UNC13D	-	73823307	73840798
PT1_Y0.2	chr17	73951641	3'	+	73951680	39	intron	NM_007292	ACOX1	-	73937588	73975515

PT1_Y0.2	chr17	73951646	5'	-	73951575	71	intron	NM_007292	ACOX1	-	73937588	73975515
PT4_Y12.2	chr17	73970291	3'	-	73970250	41	intron	NM_007292	ACOX1	-	73937588	73975515
PT1_Y11.4	chr17	74058353	5'	-	74058311	42	intron	NM_014230	SRP68	-	74035190	74068607
PT1_Y11.4	chr17	74254832	3'	-	74254713	119	6453	NM_182565	FAM100B	+	74261285	74267379
PT1_Y11.4	chr17	74424884	3'	+	74424981	97	intron	NM_022066	UBE2O	-	74385612	74449288
PT1_Y0.2	chr17	74767214	5'	+	74767261	47	intron	NM_001242534	MFS11	+	74732646	74775336
PT1_Y11.4	chr17	75445908	5'	+	75446126	218	intron	NM_001113491	9-Sep	+	75277491	75496678
PT5_Y14.5	chr17	75979318	3'	-	75979151	167	20999	NM_001142640	TNRC6C	+	76000317	76104916
PT1_Y11.4	chr17	75986673	5'	+	75986787	114	13644	NM_001142640	TNRC6C	+	76000317	76104916
PT1_Y11.4	chr17	75987657	5'	-	75987618	39	12660	NM_001142640	TNRC6C	+	76000317	76104916
PT1_Y11.4	chr17	76057121	3'	-	76057054	67	intron	NM_001142640	TNRC6C	+	76000317	76104916
PT5_Y14.5	chr17	76063654	3'	-	76063537	117	intron	NM_001142640	TNRC6C	+	76000317	76104916
PT1_Y11.4	chr17	76083679	3'	+	76083744	65	intron	NM_001142640	TNRC6C	+	76000317	76104916
PT1_Y11.4	chr17	76136991	5'	-	76136896	95	exon	NM_152468	TMC8	+	76126858	76139049
PT1_Y11.4	chr17	76723234	3'	+	76723495	261	intron	NM_004762	CYTH1	-	76670129	76778376
PT1_Y0.2	chr17	76725598	3'	-	76725374	224	intron	NM_004762	CYTH1	-	76670129	76778376
PT5_Y14.5	chr17	76750447	3'	+	76750725	278	intron	NM_004762	CYTH1	-	76670129	76778376
PT1_Y0.2	chr17	76757796	3'	+	76758002	206	intron	NM_004762	CYTH1	-	76670129	76778376
PT1_Y11.4	chr17	76760576	3'	-	76760514	62	intron	NM_004762	CYTH1	-	76670129	76778376
PT1_Y11.4	chr17	76770612	5'	-	76770375	237	intron	NM_004762	CYTH1	-	76670129	76778376
PT1_Y11.4	chr17	78345622	3'	+	78345650	28	intron	NR_029376	LOC100294	-	78325630	78388968
PT3_Y7.2	chr17	78618181	3'	-	78618043	138	intron	NM_020761	RPTOR	+	78518624	78940173
PT1_Y11.4	chr17	78688943	3'	-	78688866	77	intron	NM_020761	RPTOR	+	78518624	78940173
PT2_Y12.9	chr17	78694956	3'	-	78694857	99	intron	NM_020761	RPTOR	+	78518624	78940173
PT1_Y11.4	chr17	78734380	3'	-	78734208	172	intron	NM_020761	RPTOR	+	78518624	78940173
PT4_Y12.2	chr17	78735959	3'	-	78735855	104	intron	NM_020761	RPTOR	+	78518624	78940173
PT1_Y11.4	chr17	78886736	5'	-	78886677	59	intron	NM_020761	RPTOR	+	78518624	78940173
PT1_Y11.4	chr17	78886736	5'	-	78886687	49	intron	NM_020761	RPTOR	+	78518624	78940173
PT3_Y7.2	chr17	79211652	3'	-	79211340	312	intron	NM_144679	C17orf56	-	79202076	79212891
PT4_Y12.2	chr17	79510021	3'	+	79510171	150	intron	NM_025161	C17orf70	-	79506910	79519429
PT4_Y12.2	chr17	79510021	3'	+	79510072	51	intron	NM_025161	C17orf70	-	79506910	79519429
PT3_Y0	chr17	79511181	3'	+	79511609	428	intron	NM_025161	C17orf70	-	79506910	79519429
PT1_Y11.4	chr17	79800929	3'	+	79801160	231	104	NM_000918	P4HB	-	79801033	79818544
PT1_Y11.4	chr17	79800929	3'	+	79801156	227	104	NM_000918	P4HB	-	79801033	79818544
PT1_Y4.8	chr17	79800929	3'	+	79801507	578	104	NM_000918	P4HB	-	79801033	79818544
PT3_Y7.2	chr17	79824300	3'	-	79823970	330	1296	NM_001185077	ARHGDIA	-	79825596	79829282
PT1_Y11.4	chr17	79825667	3'	-	79825494	173	exon	NM_001185077	ARHGDIA	-	79825596	79829282
PT1_Y11.4	chr17	80093462	3'	+	80093663	201	intron	NM_198082	CCDC57	-	80059345	80170689
PT3_Y7.2	chr17	80126836	3'	+	80126890	54	intron	NM_198082	CCDC57	-	80059345	80170689
PT4_Y12.2	chr17	80260008	3'	+	80260338	330	12737	NM_006137	CD7	-	80272745	80275480
PT1_Y11.4	chr17	80421451	3'	+	80421599	148	intron	NM_001038618	NARF	+	80416059	80446143
PT3_Y7.2	chr17	80432093	3'	+	80432376	283	intron	NM_001038618	NARF	+	80416059	80446143
PT1_Y11.4	chr17	80488700	5'	+	80488775	75	intron	NM_004514	FOXK2	+	80477593	80562483
PT5_Y14.5	chr17	80490388	3'	+	80490552	164	intron	NM_004514	FOXK2	+	80477593	80562483
PT3_Y7.2	chr17	80502949	3'	-	80502603	346	intron	NM_004514	FOXK2	+	80477593	80562483
PT1_Y11.4	chr17	80504490	5'	+	80504755	265	intron	NM_004514	FOXK2	+	80477593	80562483
PT3_Y7.2	chr18	2701025	3'	+	2701088	63	intron	NM_015295	SMCHD1	+	2655885	2805015
PT2_Y12.9	chr18	2706187	3'	+	2706274	87	intron	NM_015295	SMCHD1	+	2655885	2805015
PT1_Y11.4	chr18	2970327	3'	+	2970406	79	intron	NM_014646	LPIN2	-	2916991	3011945
PT1_Y11.4	chr18	2970327	3'	+	2970382	55	intron	NM_014646	LPIN2	-	2916991	3011945
PT1_Y11.4	chr18	2970328	3'	+	2970403	75	intron	NM_014646	LPIN2	-	2916991	3011945
PT1_Y11.4	chr18	8310295	5'	+	8310492	197	intron	NM_002845	PTPRM	+	7567313	8406859
PT1_Y11.4	chr18	9207228	3'	-	9207200	28	intron	NM_001083625	ANKRD12	+	9136750	9285983
PT1_Y11.4	chr18	9212791	3'	-	9212637	154	intron	NM_001083625	ANKRD12	+	9136750	9285983
PT5_Y14.5	chr18	9235426	3'	-	9235328	98	intron	NM_001083625	ANKRD12	+	9136750	9285983
PT1_Y11.4	chr18	12611931	5'	+	12612506	575	intron	NM_001128627	SPIRE1	-	12446510	12657912
PT1_Y11.4	chr18	13060399	3'	-	13060335	64	intron	NM_032142	CEP192	+	12991360	13125051
PT1_Y0.2	chr18	13335504	3'	+	13335550	46	intron	NM_181482	C18orf1	+	13218785	13652753
PT1_Y0.2	chr18	13335509	5'	-	13335470	39	intron	NM_181482	C18orf1	+	13218785	13652753
PT1_Y11.4	chr18	19305668	3'	-	19305611	57	15876	NM_020774	MIB1	+	19321544	19450912
PT1_Y11.4	chr18	19305669	3'	-	19305610	59	15875	NM_020774	MIB1	+	19321544	19450912
PT1_Y11.4	chr18	19409559	5'	+	19409657	98	intron	NM_020774	MIB1	+	19321544	19450912
PT1_Y0.2	chr18	20792219	5'	+	20792398	179	intron	NR_023359	CABLES1	+	20714527	20840434
PT4_Y12.2	chr18	23719147	3'	-	23719006	141	intron	NM_144662	PSMA8	+	23713815	23773319
PT3_Y7.2	chr18	25559558	3'	-	25559515	43	intron	NM_001792	CDH2	-	25530929	25757445

PT1_Y11.4	chr18	43813346	5'	+	43813430	84	intron	NM_145055	C18orf25	+	43753987	43846955
PT1_Y0.2	chr18	44695083	3'	+	44695231	148	intron	NM_016097	IER3IP1	-	44681412	44702745
PT1_Y0.2	chr18	44695088	5'	-	44695025	63	intron	NM_016097	IER3IP1	-	44681412	44702745
PT1_Y11.4	chr18	48375221	3'	+	48375243	22	23467	NM_031939	MRO	-	48321489	48351754
PT3_Y7.2	chr18	48720660	3'	+	48720801	141	intron	NM_016626	MEX3C	-	48700919	48724051
PT1_Y11.4	chr18	55394951	3'	+	55394971	20	intron	NM_005603	ATP8B1	-	55313658	55470327
PT1_Y11.4	chr18	58523446	3'	+	58523571	125	483445	NM_005912	MC4R	-	58038563	58040001
PT1_Y11.4	chr18	61080947	3'	-	61080908	39	intron	NM_004869	VPS4B	-	61056424	61089752
PT1_Y11.4	chr18	61080942	5'	+	61081016	74	intron	NM_004869	VPS4B	-	61056424	61089752
PT1_Y4.8	chr18	72012138	3'	+	72012236	98	intron	NM_001174123	C18orf63	+	71983109	72026422
PT1_Y11.4	chr18	72659708	3'	+	72659752	44	143125	NM_001146189	ZNF407	+	72342918	72516583
PT4_Y12.2	chr18	74603220	3'	+	74603287	67	intron	NM_007345	ZNF236	+	74536115	74682682
PT3_Y7.2	chr19	810990	3'	-	810854	136	exon	NM_031990	PTBP1	+	797391	812327
PT1_Y11.4	chr19	1017731	3'	-	1017696	35	intron	NM_033420	C19orf6	-	1009649	1021141
PT1_Y11.4	chr19	1190295	3'	-	1190127	168	15502	NM_000455	STK11	+	1205797	1228434
PT1_Y11.4	chr19	1203468	5'	-	1203304	164	2329	NM_000455	STK11	+	1205797	1228434
PT1_Y11.4	chr19	1218050	3'	-	1218000	50	intron	NM_000455	STK11	+	1205797	1228434
PT2_Y12.9	chr19	1258617	3'	+	1258680	63	exon	NM_177401	MIDN	+	1248551	1259142
PT3_Y7.2	chr19	1597992	3'	-	1597809	183	exon	NM_006830	UQCR11	-	1597153	1605483
PT3_Y7.2	chr19	2006221	3'	+	2006403	182	intron	NM_017797	BTBD2	-	1985446	2015702
PT5_Y14.5	chr19	2092508	3'	+	2092751	243	intron	NM_130807	MOBK2A	-	2071034	2096269
PT1_Y11.4	chr19	2155563	5'	+	2155719	156	4007	NM_001077523	AP3D1	-	2100992	2151556
PT1_Y4.8	chr19	2185796	5'	+	2185835	39	intron	NM_032482	DOT1L	+	2164147	2232577
PT5_Y14.5	chr19	2592121	3'	+	2592253	132	intron	NM_052847	GNG7	-	2511217	2702746
PT1_Y11.4	chr19	2741344	3'	-	2741194	150	1270	NM_144564	SLC39A3	-	2732522	2740074
PT1_Y11.4	chr19	2844520	5'	+	2844709	189	intron	NM_001172775	ZNF555	+	2841432	2860472
PT1_Y11.4	chr19	2844520	5'	+	2844625	105	intron	NM_001172775	ZNF555	+	2841432	2860472
PT3_Y7.2	chr19	3534312	3'	+	3534376	64	intron	NM_016263	FZR1	+	3506294	3536755
PT1_Y0.2	chr19	6254110	5'	+	6254189	79	intron	NM_005934	MLLT1	-	6210391	6279959
PT1_Y11.4	chr19	6847293	3'	-	6847219	74	intron	NM_005428	VAV1	+	6772721	6857371
PT1_Y11.4	chr19	6847293	3'	-	6847234	59	intron	NM_005428	VAV1	+	6772721	6857371
PT3_Y0	chr19	7473393	3'	-	7473326	67	intron	NM_015318	ARHGEF18	+	7459998	7537371
PT3_Y7.2	chr19	7489445	3'	+	7489619	174	intron	NM_015318	ARHGEF18	+	7459998	7537371
PT1_Y0.2	chr19	7497321	3'	+	7497351	30	intron	NM_015318	ARHGEF18	+	7459998	7537371
PT1_Y11.4	chr19	7697357	3'	+	7697426	69	exon	NM_174895	PCP2	-	7696506	7698570
PT1_Y11.4	chr19	8486960	3'	+	8487063	103	intron	NM_016496	2-Mar	+	8478186	8503899
PT1_Y11.4	chr19	8486960	3'	+	8487057	97	intron	NM_016496	2-Mar	+	8478186	8503899
PT4_Y12.2	chr19	8525056	3'	+	8525088	32	intron	NM_005968	HNRNPM	+	8509802	8553996
PT4_Y12.2	chr19	8527192	3'	-	8526813	379	intron	NM_005968	HNRNPM	+	8509802	8553996
PT4_Y12.2	chr19	8527192	3'	-	8526828	364	intron	NM_005968	HNRNPM	+	8509802	8553996
PT4_Y12.2	chr19	8527192	3'	-	8526923	269	intron	NM_005968	HNRNPM	+	8509802	8553996
PT4_Y12.2	chr19	8527192	3'	-	8526982	210	intron	NM_005968	HNRNPM	+	8509802	8553996
PT4_Y12.2	chr19	8527192	3'	-	8527004	188	intron	NM_005968	HNRNPM	+	8509802	8553996
PT4_Y12.2	chr19	8527192	3'	-	8527019	173	intron	NM_005968	HNRNPM	+	8509802	8553996
PT4_Y12.2	chr19	8527192	3'	-	8527026	166	intron	NM_005968	HNRNPM	+	8509802	8553996
PT4_Y12.2	chr19	8527192	3'	-	8527031	161	intron	NM_005968	HNRNPM	+	8509802	8553996
PT4_Y12.2	chr19	8527192	3'	-	8527040	152	intron	NM_005968	HNRNPM	+	8509802	8553996
PT4_Y12.2	chr19	8527192	3'	-	8527045	147	intron	NM_005968	HNRNPM	+	8509802	8553996
PT4_Y12.2	chr19	8527192	3'	-	8527092	100	intron	NM_005968	HNRNPM	+	8509802	8553996
PT4_Y12.2	chr19	8527192	3'	-	8527097	95	intron	NM_005968	HNRNPM	+	8509802	8553996
PT4_Y12.2	chr19	8527192	3'	-	8527110	82	intron	NM_005968	HNRNPM	+	8509802	8553996
PT4_Y12.2	chr19	8527192	3'	-	8527123	69	intron	NM_005968	HNRNPM	+	8509802	8553996
PT4_Y12.2	chr19	8527192	3'	-	8527127	65	intron	NM_005968	HNRNPM	+	8509802	8553996
PT4_Y12.2	chr19	8527192	3'	-	8527147	45	intron	NM_005968	HNRNPM	+	8509802	8553996
PT4_Y12.2	chr19	8527192	3'	-	8527153	39	intron	NM_005968	HNRNPM	+	8509802	8553996
PT4_Y12.2	chr19	8527192	3'	-	8527158	34	intron	NM_005968	HNRNPM	+	8509802	8553996
PT3_Y0	chr19	9758727	3'	+	9758873	146	610	NM_017656	ZNF562	-	9759337	9785776
PT3_Y0	chr19	9758727	3'	+	9758826	99	610	NM_017656	ZNF562	-	9759337	9785776
PT1_Y0.2	chr19	10271801	3'	+	10271964	163	intron	NM_001379	DNMT1	-	10244021	10305755
PT3_Y0	chr19	10288219	3'	-	10287912	307	intron	NM_001379	DNMT1	-	10244021	10305755
PT1_Y11.4	chr19	10317380	3'	-	10317167	213	11625	NM_001379	DNMT1	-	10244021	10305755
PT1_Y11.4	chr19	10317380	3'	-	10317285	95	11625	NM_001379	DNMT1	-	10244021	10305755
PT1_Y11.4	chr19	10317380	3'	-	10317307	73	11625	NM_001379	DNMT1	-	10244021	10305755
PT1_Y11.4	chr19	10317380	3'	-	10317311	69	11625	NM_001379	DNMT1	-	10244021	10305755
PT1_Y11.4	chr19	10317380	3'	-	10317351	29	11625	NM_001379	DNMT1	-	10244021	10305755

PT1_Y11.4	chr19	10317375	5'	+	10317693	318	11620	NM_001379	DNMT1	-	10244021	10305755
PT1_Y11.4	chr19	10317375	5'	+	10317597	222	11620	NM_001379	DNMT1	-	10244021	10305755
PT1_Y11.4	chr19	10317375	5'	+	10317571	196	11620	NM_001379	DNMT1	-	10244021	10305755
PT1_Y11.4	chr19	10317375	5'	+	10317566	191	11620	NM_001379	DNMT1	-	10244021	10305755
PT1_Y0.2	chr19	10333384	3'	-	10333055	329	exon	NM_004230	S1PR2	-	10332108	10341948
PT1_Y11.4	chr19	10416716	3'	-	10416691	25	intron	NM_001103167	ZGLP1	-	10415478	10420233
PT1_Y4.8	chr19	10723114	3'	-	10722879	235	intron	NM_001145056	SLC44A2	+	10713120	10755235
PT1_Y11.4	chr19	10772549	3'	-	10772325	224	intron	NM_153464	ILF3	+	10764936	10803095
PT1_Y11.4	chr19	10772544	5'	+	10772621	77	intron	NM_153464	ILF3	+	10764936	10803095
PT5_Y14.5	chr19	10780174	3'	+	10780379	205	intron	NM_153464	ILF3	+	10764936	10803095
PT1_Y11.4	chr19	10838392	3'	-	10838352	40	intron	NM_004945	DNM2	+	10828728	10942586
PT1_Y11.4	chr19	10885393	5'	+	10885435	42	intron	NM_004945	DNM2	+	10828728	10942586
PT5_Y14.5	chr19	11021283	3'	-	11021184	99	intron	NM_199141	CARM1	+	10982252	11033448
PT1_Y0.2	chr19	11084562	5'	+	11084687	125	intron	NM_003072	SMARCA4	+	11071597	11172958
PT1_Y11.4	chr19	11230742	5'	+	11230865	123	intron	NM_001195798	LDLR	+	11200037	11244505
PT3_Y0	chr19	11836334	3'	-	11836190	144	intron	NM_001080493	ZNF823	-	11832079	11849760
PT2_Y12.9	chr19	12278194	3'	-	12278164	30	intron	NM_003437	ZNF136	+	12273871	12300064
PT1_Y11.4	chr19	12286745	5'	-	12286598	147	intron	NM_003437	ZNF136	+	12273871	12300064
PT4_Y12.2	chr19	13270571	3'	-	13270420	151	4853	NM_004907	IER2	+	13261281	13265718
PT1_Y11.4	chr19	13275517	3'	+	13275653	136	9799	NM_004907	IER2	+	13261281	13265718
PT1_Y11.4	chr19	13275518	3'	+	13275650	132	9800	NM_004907	IER2	+	13261281	13265718
PT1_Y11.4	chr19	13280015	3'	+	13280043	28	14297	NM_004907	IER2	+	13261281	13265718
PT5_Y14.5	chr19	13283554	3'	-	13283441	113	17836	NM_004907	IER2	+	13261281	13265718
PT1_Y11.4	chr19	15522056	3'	-	15521734	322	intron	NM_014371	AKAP8L	-	15490858	15529833
PT1_Y0.2	chr19	15572384	3'	+	15572544	160	exon	NM_022904	RASAL3	-	15562437	15575382
PT4_Y12.2	chr19	15644391	3'	-	15644199	192	intron	NM_173483	CYP4F22	+	15619335	15663128
PT1_Y11.4	chr19	16500352	3'	+	16500432	80	intron	NM_021235	EPS15L1	-	16472407	16582762
PT1_Y11.4	chr19	16500352	3'	+	16500422	70	intron	NM_021235	EPS15L1	-	16472407	16582762
PT3_Y0	chr19	16510792	3'	+	16510827	35	intron	NM_021235	EPS15L1	-	16472407	16582762
PT1_Y11.4	chr19	16547883	5'	-	16547792	91	intron	NM_021235	EPS15L1	-	16472407	16582762
PT3_Y0	chr19	17199823	3'	+	17199883	60	intron	NM_001130065	MYO9B	+	17186590	17324104
PT4_Y12.2	chr19	17308365	3'	-	17308171	194	intron	NM_001130065	MYO9B	+	17186590	17324104
PT5_Y14.5	chr19	17875949	3'	+	17876141	192	intron	NM_001161357	FCHO1	+	17858526	17899377
PT5_Y14.5	chr19	18179987	3'	+	18180090	103	intron	NM_005535	IL12RB1	-	18170370	18197697
PT1_Y11.4	chr19	18268515	3'	+	18268908	393	intron	NM_005027	PIK3R2	+	18264015	18281343
PT1_Y11.4	chr19	18268520	5'	-	18268147	373	intron	NM_005027	PIK3R2	+	18264015	18281343
PT1_Y4.8	chr19	18386503	3'	-	18386348	155	1184	NM_001145304	KIAA1683	-	18367905	18385319
PT1_Y4.8	chr19	18386498	5'	+	18386563	65	1179	NM_001145304	KIAA1683	-	18367905	18385319
PT1_Y11.4	chr19	19400800	3'	-	19400683	117	intron	NM_172231	SUGP1	-	19387321	19431307
PT1_Y11.4	chr19	19400800	3'	-	19400733	67	intron	NM_172231	SUGP1	-	19387321	19431307
PT1_Y11.4	chr19	19400795	5'	+	19401083	288	intron	NM_172231	SUGP1	-	19387321	19431307
PT1_Y11.4	chr19	19485664	5'	-	19485543	121	10977	NM_017660	GATAD2A	+	19496641	19619741
PT1_Y4.8	chr19	19544919	3'	+	19545025	106	intron	NM_017660	GATAD2A	+	19496641	19619741
PT1_Y4.8	chr19	19544924	5'	-	19544866	58	intron	NM_017660	GATAD2A	+	19496641	19619741
PT1_Y11.4	chr19	19546809	3'	-	19546603	206	intron	NM_017660	GATAD2A	+	19496641	19619741
PT1_Y11.4	chr19	19555089	3'	-	19554921	168	intron	NM_017660	GATAD2A	+	19496641	19619741
PT1_Y11.4	chr19	21480727	3'	-	21480550	177	intron	NM_021269	ZNF708	-	21473962	21512212
PT1_Y0.2	chr19	22026326	5'	-	22026056	270	7356	NM_003423	ZNF43	-	21987751	22018970
PT1_Y11.4	chr19	30450413	3'	+	30450663	250	intron	NM_003796	C19orf2	+	30433424	30506613
PT1_Y11.4	chr19	30461559	3'	+	30461688	129	intron	NM_003796	C19orf2	+	30433424	30506613
PT1_Y11.4	chr19	30519876	3'	-	30519756	120	13263	NM_003796	C19orf2	+	30433424	30506613
PT1_Y0.2	chr19	34676070	3'	+	34676220	150	intron	NM_001114093	LSM14A	+	34663351	34720420
PT1_Y0.2	chr19	34721506	3'	+	34721562	56	1086	NM_001114093	LSM14A	+	34663351	34720420
PT1_Y0.2	chr19	34721511	5'	-	34721315	196	1091	NM_001114093	LSM14A	+	34663351	34720420
PT1_Y0.2	chr19	34721511	5'	-	34721444	67	1091	NM_001114093	LSM14A	+	34663351	34720420
PT1_Y11.4	chr19	34942292	5'	+	34942379	87	intron	NM_005499	UBA2	+	34919267	34960798
PT1_Y11.4	chr19	35485594	3'	+	35485633	39	5651	NM_001136199	GRAMD1A	+	35491245	35517373
PT1_Y11.4	chr19	35640612	3'	-	35640382	230	intron	NM_022006	FXYP7	+	35634153	35645205
PT3_Y7.2	chr19	36141877	3'	-	36141659	218	intron	NM_001863	COX6B1	+	36139124	36149686
PT1_Y11.4	chr19	36503870	3'	+	36503997	127	intron	NM_032878	ALKBH6	-	36500021	36505141
PT1_Y11.4	chr19	36570533	3'	-	36570385	148	intron	NM_001083961	WDR62	+	36545782	36596012
PT1_Y11.4	chr19	36570534	3'	-	36570382	152	intron	NM_001083961	WDR62	+	36545782	36596012
PT4_Y12.2	chr19	36896167	3'	+	36896442	275	intron	NM_133466	ZFP82	-	36882860	36909550
PT5_Y14.5	chr19	37820603	3'	+	37820665	62	4976	NM_181786	HKR1	+	37825579	37855357
PT1_Y11.4	chr19	37871219	3'	+	37871476	257	exon	NM_032453	ZNF527	+	37862058	37883966

PT1_Y11.4	chr19	38090178	5'	-	38090116	62	intron	NM_152606	ZNF540	+	38042307	38105000
PT3_Y7.2	chr19	38135869	3'	-	38135778	91	intron	NM_014898	ZFP30	-	38123388	38146313
PT1_Y11.4	chr19	38194594	5'	+	38194709	115	intron	NM_001172677	ZNF607	-	38187263	38210691
PT1_Y0.2	chr19	38243623	3'	+	38243768	145	intron	NM_152360	ZNF573	-	38229202	38270230
PT1_Y11.4	chr19	39851186	3'	+	39851412	226	intron	NM_018028	SAMD4B	+	39833107	39875537
PT1_Y11.4	chr19	39851186	3'	+	39851402	216	intron	NM_018028	SAMD4B	+	39833107	39875537
PT1_Y11.4	chr19	39878352	5'	-	39878293	59	intron	NM_019088	PAF1	-	39876269	39881679
PT1_Y11.4	chr19	39952562	5'	+	39952678	116	intron	NM_001111020	SUPT5H	+	39936185	39967308
PT3_Y7.2	chr19	40155450	3'	+	40155549	99	4163	NM_001190441	LGALS16	+	40146557	40151287
PT1_Y11.4	chr19	40468638	3'	-	40468511	127	8434	NM_153001	PSMC4	+	40477072	40487353
PT1_Y11.4	chr19	40845559	5'	-	40845329	230	intron	NM_178830	C19orf47	-	40826970	40854293
PT3_Y0	chr19	41796530	3'	-	41796234	296	intron	NM_144732	HNRNPUL1	+	41768390	41813811
PT1_Y0.2	chr19	42048193	3'	-	42048147	46	34337	NM_033543	CEACAM21	+	42082530	42093197
PT4_Y12.2	chr19	42063312	3'	-	42063248	64	19218	NM_033543	CEACAM21	+	42082530	42093197
PT1_Y11.4	chr19	42063816	3'	-	42063630	186	18714	NM_033543	CEACAM21	+	42082530	42093197
PT5_Y14.5	chr19	42073036	3'	-	42072901	135	9494	NM_033543	CEACAM21	+	42082530	42093197
PT3_Y0	chr19	42616319	3'	+	42616617	298	intron	NM_002698	POU2F2	-	42593507	42636625
PT3_Y7.2	chr19	42780680	3'	+	42780781	101	8136	NM_015125	CIC	+	42788816	42799949
PT1_Y11.4	chr19	44652316	3'	-	44652171	145	intron	NM_001144824	ZNF234	+	44645709	44664462
PT1_Y11.4	chr19	45112447	5'	+	45112501	54	4492	NM_001205280	IGSF23	+	45116939	45140081
PT1_Y11.4	chr19	46116777	3'	+	46117070	293	intron	NM_001193269	EML2	-	46112657	46148775
PT1_Y11.4	chr19	46116777	3'	+	46117059	282	intron	NM_001193269	EML2	-	46112657	46148775
PT4_Y12.2	chr19	46167990	3'	-	46167723	267	3511	NM_000164	GIPR	+	46171501	46185717
PT1_Y11.4	chr19	46352612	3'	-	46352495	117	intron	NM_004819	SYMPK	-	46318699	46366548
PT1_Y11.4	chr19	47087033	5'	-	47086992	41	intron	NM_001205281	LOC1005060	-	46984044	47104457
PT1_Y11.4	chr19	47416639	3'	+	47416716	77	5293	NM_004491	ARHGAP35	+	47421932	47508333
PT1_Y11.4	chr19	47603701	3'	+	47603857	156	intron	NM_015168	ZC3H4	-	47567446	47617009
PT1_Y11.4	chr19	47603706	5'	-	47603442	264	intron	NM_015168	ZC3H4	-	47567446	47617009
PT1_Y4.8	chr19	47603701	3'	+	47603769	68	intron	NM_015168	ZC3H4	-	47567446	47617009
PT1_Y4.8	chr19	47603706	5'	-	47603648	58	intron	NM_015168	ZC3H4	-	47567446	47617009
PT1_Y11.4	chr19	47655988	3'	+	47656094	106	intron	NM_001145713	SAE1	+	47634079	47713893
PT5_Y14.5	chr19	47677503	3'	+	47677554	51	intron	NM_001145713	SAE1	+	47634079	47713893
PT4_Y12.2	chr19	47781580	3'	-	47781551	29	2600	NR_037675	PRR24	+	47777658	47778980
PT1_Y11.4	chr19	48751064	5'	+	48751104	40	intron	NM_014959	CARD8	-	48711342	48759203
PT1_Y0.2	chr19	49301554	3'	-	49301253	301	intron	NM_001190	BCAT2	-	49298318	49314178
PT4_Y12.2	chr19	49423780	3'	-	49423729	51	intron	NM_006184	NUCB1	+	49403306	49426540
PT1_Y11.4	chr19	50079055	3'	-	50079020	35	intron	NM_015953	NOSIP	-	50058967	50083803
PT1_Y11.4	chr19	50079056	3'	-	50079018	38	intron	NM_015953	NOSIP	-	50058967	50083803
PT4_Y12.2	chr19	50081319	3'	+	50081344	25	intron	NM_015953	NOSIP	-	50058967	50083803
PT1_Y11.4	chr19	50103338	3'	+	50103609	271	intron	NM_020719	PRR12	+	50094911	50129696
PT3_Y7.2	chr19	50126880	3'	-	50126718	162	intron	NM_020719	PRR12	+	50094911	50129696
PT3_Y7.2	chr19	50257395	3'	+	50257487	92	intron	NM_021733	TSKS	-	50243010	50266515
PT1_Y0.2	chr19	50262155	3'	+	50262409	254	intron	NM_021733	TSKS	-	50243010	50266515
PT1_Y0.2	chr19	50262160	5'	-	50262049	111	intron	NM_021733	TSKS	-	50243010	50266515
PT1_Y0.2	chr19	50326643	5'	+	50326748	105	intron	NM_030973	MED25	+	50321535	50340237
PT2_Y12.9	chr19	50327919	3'	-	50327604	315	intron	NM_030973	MED25	+	50321535	50340237
PT3_Y0	chr19	50390718	3'	-	50390395	323	intron	NM_024682	TBC1D17	+	50380681	50392007
PT1_Y11.4	chr19	52835160	3'	+	52835181	21	4337	NM_001161426	ZNF610	+	52839497	52870376
PT3_Y7.2	chr19	53189332	3'	-	53189221	111	intron	NM_018300	ZNF83	-	53115617	53193886
PT1_Y11.4	chr19	53191846	5'	+	53191957	111	intron	NM_018300	ZNF83	-	53115617	53193886
PT1_Y11.4	chr19	53356428	3'	+	53356528	100	intron	NM_199132	ZNF468	-	53341784	53360902
PT5_Y14.5	chr19	54701378	3'	-	54701149	229	2984	NM_024075	TSEN34	+	54694118	54698394
PT3_Y0	chr19	56169789	3'	-	56169763	26	intron	NM_007279	U2AF2	+	56165415	56186082
PT3_Y7.2	chr19	56655086	3'	+	56655198	112	intron	NM_018337	ZNF444	+	56652555	56672262
PT1_Y11.4	chr19	58267515	5'	-	58267431	84	exon	NM_173632	ZNF776	+	58258163	58269527
PT1_Y0.2	chr19	58292426	3'	-	58292237	189	442	NM_001077426	ZNF586	+	58281019	58291984
PT1_Y0.2	chr19	58292426	3'	-	58292342	84	442	NM_001077426	ZNF586	+	58281019	58291984
PT4_Y12.2	chr19	58708561	3'	-	58708346	215	intron	NM_133502	ZNF274	+	58694395	58724927
PT1_Y11.4	chr2	9874913	3'	+	9875134	221	103807	NM_006826	YWHAQ	-	9724105	9771106
PT1_Y11.4	chr2	9874913	3'	+	9875088	175	103807	NM_006826	YWHAQ	-	9724105	9771106
PT1_Y11.4	chr2	9874913	3'	+	9875084	171	103807	NM_006826	YWHAQ	-	9724105	9771106
PT1_Y11.4	chr2	9874913	3'	+	9875067	154	103807	NM_006826	YWHAQ	-	9724105	9771106
PT1_Y0.2	chr2	10669399	3'	+	10669449	50	41494	NM_024894	NOL10	-	10710893	10830112
PT3_Y7.2	chr2	14904684	3'	-	14904562	122	124516	NM_145175	FAM84A	+	14772809	14780168
PT2_Y12.9	chr2	20455530	3'	+	20455675	145	intron	NM_015317	PUM2	-	20448452	20527144



PT1_Y11.4	chr2	28080485	3'	+	28080616	131	intron	NM_022128	RBKS	-	28004265	28113223
PT1_Y11.4	chr2	28080490	5'	-	28080066	424	intron	NM_022128	RBKS	-	28004265	28113223
PT1_Y11.4	chr2	28176256	3'	-	28176189	67	intron	NM_199193	BRE	+	28113481	28561767
PT1_Y11.4	chr2	28520051	3'	-	28519961	90	intron	NM_199193	BRE	+	28113481	28561767
PT1_Y11.4	chr2	28846760	5'	+	28846787	27	intron	NM_153021	PLB1	+	28718937	28866653
PT1_Y11.4	chr2	32318738	5'	+	32318824	86	intron	NM_014946	SPAST	+	32288679	32382706
PT1_Y11.4	chr2	32318738	5'	+	32318794	56	intron	NM_014946	SPAST	+	32288679	32382706
PT1_Y11.4	chr2	32318743	3'	-	32318398	345	intron	NM_014946	SPAST	+	32288679	32382706
PT3_Y7.2	chr2	32450173	3'	-	32450006	167	intron	NM_001199138	NLRC4	-	32449517	32490812
PT1_Y11.4	chr2	37375237	5'	-	37374737	500	intron	NM_001135652	EIF2AK2	-	37333698	37384190
PT1_Y0.2	chr2	38884729	3'	+	38884818	89	8322	NM_138801	GALM	+	38893051	38961909
PT1_Y11.4	chr2	39563264	5'	-	39563169	95	intron	NM_003618	MAP4K3	-	39476421	39664219
PT1_Y11.4	chr2	42502067	3'	-	42501953	114	intron	NM_001145076	EML4	+	42396489	42559688
PT1_Y11.4	chr2	42502067	3'	-	42501961	106	intron	NM_001145076	EML4	+	42396489	42559688
PT1_Y11.4	chr2	43742866	5'	+	43743019	153	intron	NM_022065	THADA	-	43457974	43823113
PT1_Y4.8	chr2	43811727	5'	-	43811622	105	intron	NM_022065	THADA	-	43457974	43823113
PT1_Y11.4	chr2	54818655	5'	+	54818830	175	intron	NM_003128	SPTBN1	+	54683453	54898583
PT1_Y11.4	chr2	54820689	3'	+	54820723	34	intron	NM_003128	SPTBN1	+	54683453	54898583
PT1_Y11.4	chr2	61744349	5'	+	61744386	37	intron	NM_003400	XPO1	-	61705068	61765418
PT1_Y11.4	chr2	64251088	3'	-	64251041	47	4874	NM_016516	VPS54	-	64119666	64246214
PT1_Y11.4	chr2	64327625	3'	+	64327853	228	exon	NM_020651	PEL1	-	64319785	64371605
PT1_Y11.4	chr2	64340075	3'	+	64340291	216	intron	NM_020651	PEL1	-	64319785	64371605
PT4_Y12.2	chr2	64430121	3'	+	64430211	90	intron	NR_033837	NCRNA0030	-	64412212	64432619
PT1_Y11.4	chr2	65328189	3'	+	65328362	173	intron	NM_015543	RAB1A	-	65313987	65357435
PT3_Y7.2	chr2	68419981	3'	+	68420043	62	intron	NM_000945	PPP3R1	-	68405988	68479651
PT3_Y7.2	chr2	68679737	3'	+	68679992	255	9767	NM_001024680	FBXO48	-	68689504	68694390
PT1_Y0.2	chr2	69601395	3'	+	69601457	62	intron	NM_002056	GFPT1	-	69546904	69614382
PT1_Y11.4	chr2	69789124	3'	-	69789047	77	intron	NM_014911	AAK1	-	69685126	69870977
PT3_Y0	chr2	69820999	3'	+	69821156	157	intron	NM_014911	AAK1	-	69685126	69870977
PT1_Y11.4	chr2	69985516	5'	+	69985638	122	intron	NM_001153	ANXA4	+	69969126	70053596
PT1_Y11.4	chr2	69985516	5'	+	69985629	113	intron	NM_001153	ANXA4	+	69969126	70053596
PT1_Y11.4	chr2	70326850	3'	+	70327036	186	10516	NM_006196	PCBP1	+	70314584	70316334
PT1_Y11.4	chr2	70326850	3'	+	70327013	163	10516	NM_006196	PCBP1	+	70314584	70316334
PT1_Y11.4	chr2	70326850	3'	+	70327006	156	10516	NM_006196	PCBP1	+	70314584	70316334
PT1_Y11.4	chr2	70326850	3'	+	70326998	148	10516	NM_006196	PCBP1	+	70314584	70316334
PT1_Y11.4	chr2	70326850	3'	+	70326964	114	10516	NM_006196	PCBP1	+	70314584	70316334
PT1_Y11.4	chr2	70326850	3'	+	70326939	89	10516	NM_006196	PCBP1	+	70314584	70316334
PT1_Y11.4	chr2	70326850	3'	+	70326928	78	10516	NM_006196	PCBP1	+	70314584	70316334
PT1_Y11.4	chr2	70326850	3'	+	70326922	72	10516	NM_006196	PCBP1	+	70314584	70316334
PT1_Y11.4	chr2	70326850	3'	+	70326910	60	10516	NM_006196	PCBP1	+	70314584	70316334
PT1_Y11.4	chr2	70326855	5'	-	70326769	86	10521	NM_006196	PCBP1	+	70314584	70316334
PT1_Y11.4	chr2	70326850	3'	+	70326925	75	10516	NM_006196	PCBP1	+	70314584	70316334
PT1_Y11.4	chr2	70326855	5'	-	70326766	89	10521	NM_006196	PCBP1	+	70314584	70316334
PT1_Y11.4	chr2	70326855	5'	-	70326785	70	10521	NM_006196	PCBP1	+	70314584	70316334
PT1_Y4.8	chr2	70437382	3'	-	70437065	317	exon	NM_022173	TIA1	-	70436575	70475779
PT1_Y4.8	chr2	70437377	5'	+	70437486	109	exon	NM_022173	TIA1	-	70436575	70475779
PT1_Y11.4	chr2	70455967	5'	+	70456107	140	intron	NM_022173	TIA1	-	70436575	70475779
PT4_Y12.2	chr2	70514207	5'	-	70513993	214	intron	NM_003096	SNRPG	-	70508505	70520869
PT1_Y0.2	chr2	84882440	5'	-	84882404	36	intron	NM_001370	DNAH6	+	84743578	85046713
PT1_Y11.4	chr2	86098493	3'	+	86098549	56	3700	NM_003896	ST3GAL5	-	86066270	86094793
PT1_Y0.2	chr2	86408869	3'	+	86408978	109	intron	NM_006839	IMMT	-	86371054	86422893
PT1_Y11.4	chr2	87241304	3'	+	87241327	23	intron	NM_001032392	PLGLB1	-	87237587	87248969
PT3_Y0	chr2	99271855	3'	+	99272001	146	intron	NM_012214	MGAT4A	-	99235568	99279936
PT1_Y11.4	chr2	102907183	3'	-	102907018	165	20778	NM_016232	IL1RL1	+	102927961	102961182
PT1_Y0.2	chr2	106799061	3'	-	106798902	159	intron	NM_025076	UXS1	-	106709758	106810795
PT1_Y0.2	chr2	106799056	5'	+	106799187	131	intron	NM_025076	UXS1	-	106709758	106810795
PT1_Y11.4	chr2	113409191	3'	-	113408969	222	intron	NM_005415	SLC20A1	+	113403433	113421400
PT1_Y0.2	chr2	120637712	3'	+	120637856	144	intron	NM_002830	PTPN4	+	120517206	120735037
PT1_Y11.4	chr2	128253766	3'	-	128253697	69	intron	NM_017969	IWS1	-	128238382	128284087
PT3_Y7.2	chr2	128279836	3'	+	128279993	157	intron	NM_017969	IWS1	-	128238382	128284087
PT3_Y7.2	chr2	128279836	3'	+	128279956	120	intron	NM_017969	IWS1	-	128238382	128284087
PT3_Y7.2	chr2	135046038	5'	-	135045994	44	intron	NM_002410	MGAT5	+	135011829	135206468
PT3_Y7.2	chr2	136725001	3'	-	136724789	212	intron	NM_001349	DARS	-	136664253	136743222
PT1_Y11.4	chr2	147263128	3'	+	147263148	20	81496	NR_026904	PABPC1P2	+	147344624	147348558
PT5_Y14.5	chr2	149538493	3'	-	149538079	414	intron	NM_015630	EPC2	+	149402559	149545136

PT1_Y11.4	chr2	158529917	3'	+	158529993	76	63040	NM_001111067	ACVR1	-	158592957	158731623
PT1_Y11.4	chr2	159370503	3'	+	159370619	116	intron	NM_003628	PKP4	+	159313475	159537940
PT1_Y4.8	chr2	159370503	3'	+	159370536	33	intron	NM_003628	PKP4	+	159313475	159537940
PT1_Y0.2	chr2	159370503	3'	+	159370648	145	intron	NM_003628	PKP4	+	159313475	159537940
PT1_Y0.2	chr2	159370503	3'	+	159370618	115	intron	NM_003628	PKP4	+	159313475	159537940
PT1_Y0.2	chr2	159370503	3'	+	159370567	64	intron	NM_003628	PKP4	+	159313475	159537940
PT1_Y0.2	chr2	159370503	3'	+	159370534	31	intron	NM_003628	PKP4	+	159313475	159537940
PT1_Y11.4	chr2	161334915	3'	-	161334650	265	intron	NM_016836	RBMS1	-	161128661	161350318
PT1_Y11.4	chr2	161334916	3'	-	161334647	269	intron	NM_016836	RBMS1	-	161128661	161350318
PT1_Y0.2	chr2	162044337	5'	-	162044278	59	intron	NM_133484	TANK	+	161993465	162092683
PT5_Y14.5	chr2	169947170	3'	-	169946943	227	intron	NM_005771	DHRS9	+	169921298	169952677
PT1_Y11.4	chr2	172078548	3'	+	172078593	45	61138	NM_001136555	TLK1	-	171847332	172017410
PT1_Y0.2	chr2	174788356	5'	-	174788323	33	intron	NM_001172712	SP3	-	174771186	174828947
PT4_Y12.2	chr2	174805953	3'	+	174806158	205	intron	NM_001172712	SP3	-	174771186	174828947
PT4_Y12.2	chr2	176847039	3'	+	176847215	176	intron	NM_030650	KIAA1715	-	176790409	176867018
PT3_Y7.2	chr2	182050613	3'	-	182050501	112	119706	NR_039637	MIR4437	-	182170319	182170379
PT2_Y12.9	chr2	192508579	3'	+	192508710	131	34218	NR_024415	OBFC2A	+	192542797	192553248
PT1_Y11.4	chr2	192549900	5'	+	192550004	104	intron	NR_024415	OBFC2A	+	192542797	192553248
PT3_Y7.2	chr2	197006620	3'	-	197006451	169	intron	NM_004226	STK17B	-	196998306	197036336
PT1_Y11.4	chr2	198084497	5'	+	198084720	223	intron	NM_001195144	ANKRD44	-	197851385	198175521
PT5_Y14.5	chr2	204313032	3'	-	204312699	333	intron	NM_213589	RAPH1	-	204298538	204400058
PT5_Y14.5	chr2	204313032	3'	-	204312975	57	intron	NM_213589	RAPH1	-	204298538	204400058
PT1_Y11.4	chr2	204531103	5'	+	204531202	99	40094	NM_006139	CD28	+	204571197	204603636
PT1_Y0.2	chr2	205919644	3'	+	205919914	270	intron	NM_205863	PARD3B	+	205410515	206484886
PT3_Y7.2	chr2	208435693	3'	+	208435803	110	intron	NM_134442	CREB1	+	208394615	208470284
PT1_Y11.4	chr2	208441534	5'	-	208441442	92	intron	NM_134442	CREB1	+	208394615	208470284
PT1_Y11.4	chr2	208589605	5'	-	208589317	288	intron	NM_001142300	CCNYL1	+	208576263	208620896
PT4_Y12.2	chr2	210522757	3'	+	210522863	106	intron	NM_001039538	MAP2	+	210288770	210598834
PT1_Y0.2	chr2	213978506	5'	+	213978630	124	intron	NM_016260	IKZF2	-	213864410	214016333
PT3_Y7.2	chr2	213988491	3'	+	213988605	114	intron	NM_016260	IKZF2	-	213864410	214016333
PT4_Y12.2	chr2	219101540	3'	-	219101318	222	intron	NM_152862	ARPC2	+	219081873	219119071
PT1_Y11.4	chr2	219552263	5'	-	219552103	160	intron	NM_015690	STK36	+	219536761	219567440
PT3_Y7.2	chr2	220044215	3'	+	220044309	94	intron	NM_024293	FAM134A	+	220042938	220050197
PT1_Y11.4	chr2	234923784	3'	-	234923687	97	intron	NM_024080	TRPM8	+	234826042	234928166
PT1_Y11.4	chr2	242265354	3'	-	242265313	41	intron	NM_006155	2-Sep	+	242254722	242293441
PT1_Y11.4	chr2	242265349	5'	+	242265619	270	intron	NM_006155	2-Sep	+	242254722	242293441
PT1_Y0.2	chr2	242277650	3'	-	242277533	117	intron	NM_006155	2-Sep	+	242254722	242293441
PT2_Y12.9	chr2	242315100	3'	-	242315067	33	intron	NM_014808	FARP2	+	242295663	242434256
PT3_Y7.2	chr2	242652039	3'	-	242651858	181	intron	NM_032329	ING5	+	242641455	242668896
PT1_Y4.8	chr20	3961150	3'	-	3960939	211	intron	NM_001134337	RNF24	-	3912068	3996054
PT1_Y11.4	chr20	4029967	3'	+	4029987	20	33913	NM_001134337	RNF24	-	3912068	3996054
PT1_Y0.2	chr20	5562184	3'	+	5562258	74	intron	NM_019593	GPCPD1	-	5525079	5591672
PT1_Y11.4	chr20	5563263	5'	-	5563191	72	intron	NM_019593	GPCPD1	-	5525079	5591672
PT1_Y0.2	chr20	21345630	3'	-	21345648	112	intron	NM_012255	XRN2	+	21283941	21370463
PT1_Y11.4	chr20	30180316	3'	+	30180352	36	12769	NM_002165	ID1	+	30193085	30194317
PT5_Y14.5	chr20	30991170	3'	-	30990912	258	30818	NM_015338	ASXL1	+	30946146	30960352
PT3_Y7.2	chr20	31424525	3'	+	31424708	183	exon	NM_012325	MAPRE1	+	31407698	31438211
PT1_Y11.4	chr20	32942299	3'	-	32942274	25	8762	NM_031483	ITCH	+	32951061	33099197
PT1_Y11.4	chr20	34234466	3'	-	34234330	136	intron	NM_152926	CPNE1	-	34213952	34241831
PT1_Y11.4	chr20	34295826	3'	-	34295650	176	intron	NM_184234	RBM39	-	34291530	34330258
PT4_Y12.2	chr20	35509365	3'	+	35509595	230	intron	NM_080628	C20orf118	+	35504569	35522632
PT3_Y7.2	chr20	37165442	3'	+	37165551	109	intron	NM_020336	RALGAPB	+	37101485	37207504
PT1_Y11.4	chr20	37167981	5'	+	37168048	67	intron	NM_020336	RALGAPB	+	37101485	37207504
PT1_Y11.4	chr20	37167981	5'	-	37168038	57	intron	NM_020336	RALGAPB	+	37101485	37207504
PT1_Y11.4	chr20	39704657	3'	-	39704624	33	intron	NM_003286	TOP1	+	39657461	39753126
PT1_Y11.4	chr20	39704652	5'	+	39704688	36	intron	NM_003286	TOP1	+	39657461	39753126
PT4_Y12.2	chr20	39891370	3'	-	39891203	167	intron	NM_015035	ZHX3	-	39807088	39928739
PT1_Y11.4	chr20	43561095	5'	+	43561610	515	intron	NM_001124756	PABPC1L	+	43538702	43567962
PT1_Y11.4	chr20	43561095	5'	+	43561341	246	intron	NM_001124756	PABPC1L	+	43538702	43567962
PT1_Y11.4	chr20	43561095	5'	+	43561308	213	intron	NM_001124756	PABPC1L	+	43538702	43567962
PT1_Y11.4	chr20	43561095	5'	+	43561236	141	intron	NM_001124756	PABPC1L	+	43538702	43567962
PT1_Y11.4	chr20	43561095	5'	+	43561204	109	intron	NM_001124756	PABPC1L	+	43538702	43567962
PT1_Y11.4	chr20	43561095	5'	+	43561125	30	intron	NM_001124756	PABPC1L	+	43538702	43567962
PT1_Y11.4	chr20	43561095	5'	+	43561603	508	intron	NM_001124756	PABPC1L	+	43538702	43567962
PT1_Y0.2	chr20	43561095	5'	+	43561385	290	intron	NM_001124756	PABPC1L	+	43538702	43567962

PT3_Y7.2	chr20	43561095	5'	+	43561293	198	intron	NM_001124756	PABPC1L	+	43538702	43567962
PT1_Y11.4	chr20	46183984	5'	+	46184010	26	intron	NM_006534	NCOA3	+	46130600	46285621
PT1_Y11.4	chr20	46206736	3'	+	46206917	181	intron	NM_006534	NCOA3	+	46130600	46285621
PT1_Y11.4	chr20	48250191	5'	+	48250266	75	exon	NM_004776	B4GALT5	-	48249482	48330421
PT1_Y0.2	chr20	49522968	3'	+	49523154	186	intron	NM_015339	ADNP	-	49506882	49547527
PT1_Y11.4	chr20	56901557	3'	-	56901494	63	intron	NM_020673	RAB22A	+	56884770	56942563
PT1_Y11.4	chr20	56902364	3'	+	56902399	35	intron	NM_020673	RAB22A	+	56884770	56942563
PT1_Y11.4	chr20	57745865	3'	-	57745804	61	20209	NM_178457	ZNF831	+	57766074	57834167
PT4_Y12.2	chr20	57778717	3'	-	57778586	131	intron	NM_178457	ZNF831	+	57766074	57834167
PT1_Y0.2	chr20	57822203	3'	+	57822264	61	intron	NM_178457	ZNF831	+	57766074	57834167
PT1_Y11.4	chr20	61365169	3'	+	61365293	124	intron	NM_002531	NTSR1	+	61340188	61394123
PT1_Y11.4	chr20	61365169	3'	+	61365280	111	intron	NM_002531	NTSR1	+	61340188	61394123
PT1_Y11.4	chr20	61547520	5'	-	61547348	172	intron	NM_033081	DIDO1	-	61509089	61569304
PT1_Y11.4	chr21	14640068	3'	-	14640048	20	138636	NR_036164	MIR3156-3	-	14778704	14778781
PT1_Y0.2	chr21	15899422	3'	+	15899638	216	intron	NM_022136	SAMSN1	-	15857548	15918664
PT1_Y0.2	chr21	16030088	3'	+	16030340	252	111424	NM_022136	SAMSN1	-	15857548	15918664
PT1_Y11.4	chr21	19175189	5'	-	19175126	63	intron	NM_001100420	C21orf91	-	19161283	19191703
PT1_Y11.4	chr21	34123366	3'	-	34123124	242	intron	NM_016631	GCFC1	-	34106209	34144169
PT1_Y11.4	chr21	34607527	3'	+	34607618	91	intron	NM_000874	IFNAR2	+	34602230	34636820
PT1_Y11.4	chr21	34918474	5'	+	34918715	241	intron	NM_032195	SON	+	34915349	34949812
PT1_Y11.4	chr21	38620652	3'	+	38620845	193	intron	NM_006052	DSCR3	-	38595725	38639833
PT1_Y11.4	chr21	40559631	3'	+	40559732	101	exon	NM_033656	BRWD1	-	40557403	40685712
PT1_Y11.4	chr21	42394963	3'	-	42394860	103	118463	NR_024100	NCRNA0032	-	42513426	42519991
PT4_Y12.2	chr21	45295997	3'	+	45296175	178	intron	NM_020132	AGPAT3	+	45285115	45407475
PT4_Y12.2	chr21	45295997	3'	+	45296076	79	intron	NM_020132	AGPAT3	+	45285115	45407475
PT4_Y12.2	chr21	45295997	3'	+	45296055	58	intron	NM_020132	AGPAT3	+	45285115	45407475
PT4_Y12.2	chr21	45295997	3'	+	45296047	50	intron	NM_020132	AGPAT3	+	45285115	45407475
PT4_Y12.2	chr21	45295997	3'	+	45296033	36	intron	NM_020132	AGPAT3	+	45285115	45407475
PT4_Y12.2	chr21	45295997	3'	+	45296022	25	intron	NM_020132	AGPAT3	+	45285115	45407475
PT1_Y11.4	chr21	46279097	3'	-	46278808	289	intron	NM_004339	PTTG1IP	-	46269499	46293818
PT4_Y12.2	chr21	46342467	3'	+	46342548	81	intron	NR_038311	LOC1005057	+	46340949	46349595
PT1_Y11.4	chr21	47927057	3'	+	47927147	90	intron	NM_001146116	DIP2A	+	47878861	47976432
PT1_Y11.4	chr21	47927062	5'	-	47926924	138	intron	NM_001146116	DIP2A	+	47878861	47976432
PT1_Y11.4	chr21	47989217	3'	+	47989250	33	12785	NM_001146116	DIP2A	+	47878861	47976432
PT1_Y11.4	chr21	47990522	3'	+	47990775	253	14090	NM_001146116	DIP2A	+	47878861	47976432
PT1_Y11.4	chr21	47990522	3'	+	47990755	233	14090	NM_001146116	DIP2A	+	47878861	47976432
PT1_Y11.4	chr21	47990522	3'	+	47990706	184	14090	NM_001146116	DIP2A	+	47878861	47976432
PT1_Y11.4	chr21	47990522	3'	+	47990695	173	14090	NM_001146116	DIP2A	+	47878861	47976432
PT1_Y11.4	chr21	47990522	3'	+	47990668	146	14090	NM_001146116	DIP2A	+	47878861	47976432
PT1_Y11.4	chr21	47990522	3'	+	47990620	98	14090	NM_001146116	DIP2A	+	47878861	47976432
PT1_Y11.4	chr21	47990522	3'	+	47990596	74	14090	NM_001146116	DIP2A	+	47878861	47976432
PT1_Y11.4	chr21	47990522	3'	+	47990571	49	14090	NM_001146116	DIP2A	+	47878861	47976432
PT1_Y11.4	chr21	47990527	5'	-	47990305	222	14095	NM_001146116	DIP2A	+	47878861	47976432
PT1_Y11.4	chr21	47990527	5'	-	47990359	168	14095	NM_001146116	DIP2A	+	47878861	47976432
PT1_Y11.4	chr21	47990527	5'	-	47990408	119	14095	NM_001146116	DIP2A	+	47878861	47976432
PT1_Y11.4	chr21	47990527	5'	-	47990463	64	14095	NM_001146116	DIP2A	+	47878861	47976432
PT1_Y11.4	chr21	47990522	3'	+	47990681	159	14090	NM_001146116	DIP2A	+	47878861	47976432
PT1_Y11.4	chr21	47990527	5'	-	47990455	72	14095	NM_001146116	DIP2A	+	47878861	47976432
PT1_Y11.4	chr21	47990527	5'	-	47990497	30	14095	NM_001146116	DIP2A	+	47878861	47976432
PT1_Y11.4	chr21	47990523	3'	+	47990771	248	14091	NM_001146116	DIP2A	+	47878861	47976432
PT1_Y11.4	chr21	47990523	3'	+	47990573	50	14091	NM_001146116	DIP2A	+	47878861	47976432
PT1_Y11.4	chr21	47990524	3'	+	47990755	231	14092	NM_001146116	DIP2A	+	47878861	47976432
PT3_Y7.2	chr22	19803165	5'	+	19803316	151	intron	NM_053004	GNB1L	-	19775933	19842462
PT5_Y14.5	chr22	21955507	3'	+	21955537	30	intron	NR_028437	UBE2L3	+	21921956	21978323
PT3_Y7.2	chr22	21955764	3'	-	21955643	121	intron	NR_028437	UBE2L3	+	21921956	21978323
PT1_Y11.4	chr22	25496460	3'	+	25496878	418	intron	NM_001145206	KIAA1671	+	25423940	25593415
PT1_Y11.4	chr22	26062422	3'	-	26062396	26	intron	NM_005160	ADRBK2	+	25960860	26125258
PT5_Y14.5	chr22	28346435	3'	-	28346405	30	intron	NR_026962	TTC28-AS1	+	28315363	28398667
PT1_Y11.4	chr22	28820612	3'	+	28820880	268	intron	NM_001145418	TTC28	-	28374001	29075853
PT1_Y11.4	chr22	28820617	5'	-	28820530	87	intron	NM_001145418	TTC28	-	28374001	29075853
PT3_Y7.2	chr22	29912302	3'	+	29912350	48	intron	NM_003678	THOC5	-	29904155	29949644
PT1_Y11.4	chr22	30307780	3'	+	30307942	162	intron	NM_021090	MTMR3	+	30279157	30426857
PT1_Y11.4	chr22	30514664	5'	-	30514391	273	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30514808	600	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30514848	560	intron	NM_152510	HORMAD2	+	30476452	30573062

PT3_Y7.2	chr22	30515408	3'	-	30514946	462	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30514957	451	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30514965	443	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515006	402	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515036	372	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515049	359	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515056	352	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515070	338	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515076	332	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515092	316	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515114	294	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515120	288	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515127	281	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515141	267	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515145	263	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515150	258	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515156	252	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515159	249	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515170	238	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515176	232	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515181	227	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515186	222	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515193	215	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515204	204	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515209	199	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515213	195	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515218	190	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515223	185	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515226	182	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515230	178	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515235	173	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515239	169	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515245	163	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515253	155	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515257	151	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515262	146	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515269	139	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515273	135	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515277	131	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515282	126	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515286	122	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515290	118	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515296	112	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515300	108	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515304	104	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515308	100	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515314	94	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515318	90	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515324	84	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515329	79	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515339	69	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515343	65	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515347	61	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515351	57	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515356	52	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515360	48	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515365	43	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515369	39	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515374	34	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30515408	3'	-	30515382	26	intron	NM_152510	HORMAD2	+	30476452	30573062
PT3_Y7.2	chr22	30555480	3'	+	30555654	174	intron	NM_152510	HORMAD2	+	30476452	30573062
PT1_Y11.4	chr22	31333612	3'	+	31333673	61	exon	NM_014941	MORC2	-	31322599	31364187
PT5_Y14.5	chr22	31726895	3'	+	31726921	26	intron	NM_014323	PATZ1	-	31721789	31742249
PT1_Y11.4	chr22	31927174	5'	+	31927347	173	intron	NM_014775	SFI1	+	31892260	32014534
PT1_Y11.4	chr22	31927174	5'	+	31927328	154	intron	NM_014775	SFI1	+	31892260	32014534

PT5_Y14.5	chr22	32096142	3'	+	32096244	102	intron	NM_173566	PRR14L	-	32077333	32146120
PT1_Y11.4	chr22	32185419	5'	+	32185634	215	intron	NM_001242897	DEPDC5	+	32149936	32303020
PT1_Y4.8	chr22	37542415	5'	-	37542170	245	intron	NM_000878	IL2RB	-	37521879	37545962
PT3_Y0	chr22	39094499	3'	-	39094441	58	intron	NM_014876	JOSD1	-	39081547	39096459
PT1_Y11.4	chr22	39482728	3'	-	39482644	84	intron	NM_021822	APOBEC3G	+	39473009	39483748
PT1_Y11.4	chr22	39482729	3'	-	39482394	335	intron	NM_021822	APOBEC3G	+	39473009	39483748
PT1_Y11.4	chr22	39482729	3'	-	39482518	211	intron	NM_021822	APOBEC3G	+	39473009	39483748
PT1_Y11.4	chr22	39482729	3'	-	39482641	88	intron	NM_021822	APOBEC3G	+	39473009	39483748
PT1_Y11.4	chr22	39482729	3'	-	39482664	65	intron	NM_021822	APOBEC3G	+	39473009	39483748
PT1_Y11.4	chr22	39482729	3'	-	39482669	60	intron	NM_021822	APOBEC3G	+	39473009	39483748
PT3_Y7.2	chr22	39804108	3'	-	39804011	97	intron	NM_006116	TAB1	+	39795758	39833132
PT1_Y11.4	chr22	40527774	3'	+	40527816	42	intron	NM_001024843	TNRC6B	+	40440820	40731812
PT1_Y11.4	chr22	40527779	5'	-	40527626	153	intron	NM_001024843	TNRC6B	+	40440820	40731812
PT5_Y14.5	chr22	40643289	3'	-	40643117	172	intron	NM_001024843	TNRC6B	+	40440820	40731812
PT5_Y14.5	chr22	40644783	3'	-	40644580	203	intron	NM_001024843	TNRC6B	+	40440820	40731812
PT1_Y11.4	chr22	40648761	3'	-	40648256	505	intron	NM_001024843	TNRC6B	+	40440820	40731812
PT1_Y11.4	chr22	40695990	3'	+	40696101	111	intron	NM_001024843	TNRC6B	+	40440820	40731812
PT1_Y11.4	chr22	40695990	3'	+	40696089	99	intron	NM_001024843	TNRC6B	+	40440820	40731812
PT1_Y11.4	chr22	40838746	5'	+	40838902	156	intron	NM_020831	MKL1	-	40806291	41032690
PT1_Y11.4	chr22	40848614	5'	+	40848770	156	intron	NM_020831	MKL1	-	40806291	41032690
PT1_Y11.4	chr22	40848614	5'	+	40848689	75	intron	NM_020831	MKL1	-	40806291	41032690
PT1_Y11.4	chr22	40848614	5'	+	40848664	50	intron	NM_020831	MKL1	-	40806291	41032690
PT1_Y11.4	chr22	40848614	5'	+	40848684	70	intron	NM_020831	MKL1	-	40806291	41032690
PT1_Y11.4	chr22	40862945	3'	-	40862690	255	intron	NM_020831	MKL1	-	40806291	41032690
PT1_Y11.4	chr22	40862945	3'	-	40862725	220	intron	NM_020831	MKL1	-	40806291	41032690
PT1_Y11.4	chr22	40862945	3'	-	40862911	34	intron	NM_020831	MKL1	-	40806291	41032690
PT1_Y11.4	chr22	40953670	5'	+	40953711	41	intron	NM_020831	MKL1	-	40806291	41032690
PT1_Y11.4	chr22	41265938	3'	+	41266111	173	7153	NM_022098	XPNPPE3	+	41253084	41258785
PT1_Y11.4	chr22	41837103	3'	-	41837067	36	intron	NM_016272	TOB2	-	41829491	41843027
PT5_Y14.5	chr22	43373021	3'	-	43372689	332	17134	NM_007229	PACSIN2	-	43265771	43355887
PT4_Y12.2	chr22	45581535	3'	+	45581562	27	exon	NM_007172	NUP50	+	45559725	45583890
PT1_Y0.2	chr22	45748216	3'	+	45748425	209	intron	NM_148674	SMC1B	-	45739944	45809500
PT1_Y0.2	chr22	45748216	3'	+	45748409	193	intron	NM_148674	SMC1B	-	45739944	45809500
PT1_Y0.2	chr22	45748216	3'	+	45748399	183	intron	NM_148674	SMC1B	-	45739944	45809500
PT1_Y0.2	chr22	45748216	3'	+	45748331	115	intron	NM_148674	SMC1B	-	45739944	45809500
PT1_Y0.2	chr22	45748216	3'	+	45748249	33	intron	NM_148674	SMC1B	-	45739944	45809500
PT1_Y0.2	chr22	50205945	3'	+	50206267	322	intron	NM_014577	BRD1	-	50166936	50218452
PT1_Y11.4	chr22	50298649	3'	-	50298538	111	intron	NM_024105	ALG12	-	50296853	50312106
PT1_Y11.4	chr22	50298649	3'	-	50298565	84	intron	NM_024105	ALG12	-	50296853	50312106
PT1_Y11.4	chr22	50298644	5'	+	50298743	99	intron	NM_024105	ALG12	-	50296853	50312106
PT1_Y11.4	chr22	50298644	5'	+	50298709	65	intron	NM_024105	ALG12	-	50296853	50312106
PT1_Y11.4	chr22	50298647	5'	+	50298782	135	intron	NM_024105	ALG12	-	50296853	50312106
PT1_Y11.4	chr22	50306790	3'	+	50306854	64	intron	NM_024105	ALG12	-	50296853	50312106
PT1_Y0.2	chr22	50814767	5'	-	50814599	168	intron	NM_001242898	PPP6R2	+	50781745	50883518
PT1_Y11.4	chr22	50815010	3'	-	50814929	81	intron	NM_001242898	PPP6R2	+	50781745	50883518
PT1_Y11.4	chr22	50828981	3'	-	50828881	100	intron	NM_001242898	PPP6R2	+	50781745	50883518
PT4_Y12.2	chr22	50979250	3'	+	50979450	200	7211	NM_138433	KLHDC7B	+	50986461	50989452
PT1_Y0.2	chr22	51062321	5'	-	51062190	131	exon	NM_001085426	ARSA	-	51061181	51066601
PT1_Y11.4	chr3	5200380	3'	-	5200305	75	intron	NM_018184	ARL8B	+	5163929	5222601
PT1_Y11.4	chr3	5240691	3'	-	5240495	196	intron	NM_014674	EDEM1	+	5229358	5261650
PT1_Y11.4	chr3	11850313	3'	+	11850442	129	intron	NM_138807	C3orf31	-	11831918	11888352
PT1_Y11.4	chr3	15036603	3'	-	15036569	34	intron	NM_003298	NR2C2	+	14989235	15090780
PT1_Y11.4	chr3	15036603	3'	-	15036580	23	intron	NM_003298	NR2C2	+	14989235	15090780
PT3_Y7.2	chr3	15294446	3'	+	15294534	88	23	NM_014296	CAPN7	+	15247732	15294423
PT1_Y11.4	chr3	15719842	5'	+	15719871	29	exon	NM_001195098	ANKRD28	-	15708743	15798058
PT1_Y11.4	chr3	16424668	5'	-	16424609	59	intron	NM_015150	RFTN1	-	16357351	16555222
PT3_Y7.2	chr3	20154192	3'	-	20153968	224	intron	NM_003884	KAT2B	+	20081523	20195896
PT1_Y11.4	chr3	29908118	3'	+	29908141	23	intron	NM_001177712	RBMS3	+	29322802	30051886
PT1_Y0.2	chr3	44890532	3'	+	44890652	120	intron	NM_020242	KIF15	+	44803208	44894748
PT1_Y0.2	chr3	45761239	3'	+	45761328	89	intron	NM_014016	SACM1L	+	45730753	45786900
PT1_Y11.4	chr3	46386611	3'	-	46386471	140	8623	NM_001123396	CCR2	+	46395234	46402413
PT1_Y11.4	chr3	46386611	3'	-	46386494	117	8623	NM_001123396	CCR2	+	46395234	46402413
PT1_Y11.4	chr3	47076655	5'	+	47076752	97	intron	NM_014159	SETD2	-	47057897	47205467
PT1_Y11.4	chr3	47095792	5'	+	47095998	206	intron	NM_014159	SETD2	-	47057897	47205467
PT5_Y14.5	chr3	47159811	3'	+	47159913	102	intron	NM_014159	SETD2	-	47057897	47205467

PT1_Y11.4	chr3	47438547	3'	-	47438390	157	intron	NM_015466	PTPN23	+	47422490	47454931
PT1_Y11.4	chr3	47981137	5'	-	47980903	234	intron	NM_001134364	MAP4	-	47892179	48130769
PT1_Y11.4	chr3	47981137	5'	-	47981013	124	intron	NM_001134364	MAP4	-	47892179	48130769
PT1_Y11.4	chr3	47981137	5'	-	47981084	53	intron	NM_001134364	MAP4	-	47892179	48130769
PT1_Y0.2	chr3	47981137	5'	-	47980829	308	intron	NM_001134364	MAP4	-	47892179	48130769
PT1_Y11.4	chr3	48040913	5'	+	48040955	42	intron	NM_001134364	MAP4	-	47892179	48130769
PT1_Y11.4	chr3	48078567	5'	+	48078782	215	intron	NM_001134364	MAP4	-	47892179	48130769
PT1_Y11.4	chr3	48087365	3'	-	48087341	24	intron	NM_001134364	MAP4	-	47892179	48130769
PT5_Y14.5	chr3	48735746	3'	-	48735529	217	intron	NM_016291	IP6K2	-	48725435	48754711
PT1_Y11.4	chr3	48965866	3'	-	48965627	239	intron	NM_006321	ARIH2	+	48956280	49022971
PT1_Y11.4	chr3	48965861	5'	+	48965983	122	intron	NM_006321	ARIH2	+	48956280	49022971
PT1_Y11.4	chr3	49242014	3'	+	49242115	101	intron	NM_178173	CCDC36	+	49235860	49295537
PT4_Y12.2	chr3	49375155	3'	+	49375392	237	intron	NM_003363	USP4	-	49314576	49377536
PT4_Y12.2	chr3	49375155	3'	+	49375313	158	intron	NM_003363	USP4	-	49314576	49377536
PT4_Y12.2	chr3	49375155	3'	+	49375200	45	intron	NM_003363	USP4	-	49314576	49377536
PT1_Y11.4	chr3	49716238	5'	+	49716470	232	intron	NM_001640	APEH	+	49711434	49720934
PT3_Y7.2	chr3	49790921	3'	-	49790665	256	intron	NM_001006115	IP6K1	-	49761727	49823627
PT1_Y11.4	chr3	49868385	5'	+	49868839	454	intron	NM_005879	TRAIP	-	49866027	49893992
PT1_Y11.4	chr3	49868385	5'	+	49868832	447	intron	NM_005879	TRAIP	-	49866027	49893992
PT1_Y11.4	chr3	50076936	3'	+	50077060	124	intron	NM_001167582	RBM6	+	49977476	50114685
PT5_Y14.5	chr3	50148455	3'	-	50148216	239	intron	NM_005778	RBM5	+	50126351	50156392
PT1_Y11.4	chr3	51434782	3'	-	51434598	184	exon	NM_013286	RBM15B	+	51428698	51435336
PT1_Y11.4	chr3	51434782	3'	-	51434717	65	exon	NM_013286	RBM15B	+	51428698	51435336
PT1_Y11.4	chr3	51434782	3'	-	51434745	37	exon	NM_013286	RBM15B	+	51428698	51435336
PT1_Y11.4	chr3	51434782	3'	-	51434754	28	exon	NM_013286	RBM15B	+	51428698	51435336
PT1_Y11.4	chr3	51434777	5'	+	51434893	116	exon	NM_013286	RBM15B	+	51428698	51435336
PT1_Y11.4	chr3	51434777	5'	+	51434948	171	exon	NM_013286	RBM15B	+	51428698	51435336
PT1_Y4.8	chr3	51434777	5'	+	51434905	128	exon	NM_013286	RBM15B	+	51428698	51435336
PT1_Y0.2	chr3	51434777	5'	+	51434858	81	exon	NM_013286	RBM15B	+	51428698	51435336
PT2_Y12.9	chr3	51482755	3'	+	51482855	100	intron	NM_001171904	VPRBP	-	51433297	51534018
PT1_Y0.2	chr3	51484268	5'	+	51484366	98	intron	NM_001171904	VPRBP	-	51433297	51534018
PT3_Y7.2	chr3	52952495	3'	-	52952466	29	intron	NM_016329	SFMBT1	-	52937582	53079335
PT1_Y11.4	chr3	57830799	3'	-	57830521	278	intron	NM_007159	SLMAP	+	57743173	57914894
PT1_Y11.4	chr3	57830799	3'	-	57830539	260	intron	NM_007159	SLMAP	+	57743173	57914894
PT1_Y11.4	chr3	59521453	5'	+	59521483	30	213582	NM_001166243	FHIT	-	59735035	61237133
PT2_Y12.9	chr3	69079256	3'	-	69079213	43	intron	NM_007114	TMF1	-	69068977	69101484
PT1_Y0.2	chr3	69093696	5'	-	69093654	42	exon	NM_007114	TMF1	-	69068977	69101484
PT1_Y11.4	chr3	69112258	5'	+	69112453	195	exon	NM_003968	UBA3	-	69103880	69129524
PT1_Y11.4	chr3	69321383	5'	+	69321647	264	intron	NM_015123	FRMD4B	-	69219145	69435430
PT1_Y0.2	chr3	100450950	5'	-	100450796	154	intron	NM_001007565	TFG	+	100428133	100467811
PT1_Y11.4	chr3	105959465	3'	-	105959104	361	371578	NM_170662	CBLB	-	105377108	105587887
PT1_Y11.4	chr3	107491132	5'	-	107490876	256	intron	NM_001142568	BBX	+	107241782	107530049
PT4_Y12.2	chr3	114394825	3'	-	114394685	140	67466	NR_039959	MIR4796	-	114462291	114462372
PT1_Y0.2	chr3	114543432	3'	-	114543399	33	81060	NR_039959	MIR4796	-	114462291	114462372
PT1_Y11.4	chr3	119112469	3'	-	119112362	107	intron	NM_020754	ARHGAP31	+	119013219	119138323
PT1_Y0.2	chr3	122189773	5'	-	122189689	84	intron	NM_002264	KPNA1	-	122140747	122233786
PT1_Y0.2	chr3	122189773	5'	-	122189705	68	intron	NM_002264	KPNA1	-	122140747	122233786
PT1_Y11.4	chr3	128457930	5'	+	128458043	113	intron	NM_004637	RAB7A	+	128444978	128533641
PT4_Y12.2	chr3	141259103	3'	-	141258995	108	intron	NM_006506	RASA2	+	141205925	141331197
PT1_Y11.4	chr3	141903731	5'	-	141903610	121	exon	NR_033289	GK5	-	141876368	141944449
PT1_Y11.4	chr3	141903731	5'	-	141903707	24	exon	NR_033289	GK5	-	141876368	141944449
PT1_Y11.4	chr3	152114365	3'	-	152114259	106	intron	NM_207292	MBNL1	+	151985828	152183569
PT4_Y12.2	chr3	152898600	3'	-	152898373	227	12337	NM_002886	RAP2B	+	152880028	152886263
PT1_Y11.4	chr3	169872893	5'	+	169873103	210	intron	NM_024947	PHC3	-	169805367	169899537
PT1_Y11.4	chr3	182653272	3'	+	182653353	81	7286	NM_020640	DCUN1D1	-	182660558	182698326
PT1_Y11.4	chr3	183164404	5'	-	183164366	38	991	NR_038302	LOC100505061	+	183165395	183173800
PT1_Y11.4	chr3	183164404	5'	-	183164373	31	991	NR_038302	LOC100505061	+	183165395	183173800
PT1_Y0.2	chr3	184690379	3'	-	184690037	342	intron	NM_015303	VPS8	+	184529930	184770402
PT1_Y0.2	chr3	184690379	3'	-	184690193	186	intron	NM_015303	VPS8	+	184529930	184770402
PT1_Y0.2	chr3	184690379	3'	-	184690331	48	intron	NM_015303	VPS8	+	184529930	184770402
PT1_Y0.2	chr3	184690379	3'	-	184690345	34	intron	NM_015303	VPS8	+	184529930	184770402
PT1_Y11.4	chr3	189376555	5'	-	189376498	57	intron	NM_001114978	TP63	+	189349215	189599284
PT1_Y0.2	chr3	194139841	3'	-	194139723	118	intron	NM_024524	ATP13A3	-	194123402	194188968
PT4_Y12.2	chr3	195099387	3'	+	195099455	68	intron	NM_012287	ACAP2	-	194995464	195163817
PT4_Y12.2	chr3	195099387	3'	+	195099435	48	intron	NM_012287	ACAP2	-	194995464	195163817

PT1_Y11.4	chr3	195867998	5'	+	195868021	23	1508	NR_034088	LOC401109	+	195869506	195887761
PT2_Y12.9	chr3	196499558	3'	-	196499446	112	intron	NM_002577	PAK2	+	196466727	196559518
PT2_Y12.9	chr3	196499558	3'	-	196499452	106	intron	NM_002577	PAK2	+	196466727	196559518
PT1_Y11.4	chr3	196543500	3'	+	196543751	251	intron	NM_002577	PAK2	+	196466727	196559518
PT1_Y11.4	chr3	196543500	3'	+	196543692	192	intron	NM_002577	PAK2	+	196466727	196559518
PT1_Y11.4	chr3	196543500	3'	+	196543605	105	intron	NM_002577	PAK2	+	196466727	196559518
PT1_Y11.4	chr3	196543500	3'	+	196543583	83	intron	NM_002577	PAK2	+	196466727	196559518
PT1_Y11.4	chr3	196543500	3'	+	196543539	39	intron	NM_002577	PAK2	+	196466727	196559518
PT1_Y11.4	chr3	196543500	3'	+	196543535	35	intron	NM_002577	PAK2	+	196466727	196559518
PT1_Y11.4	chr3	196543501	3'	+	196543602	101	intron	NM_002577	PAK2	+	196466727	196559518
PT1_Y11.4	chr3	196546399	5'	+	196546672	273	intron	NM_002577	PAK2	+	196466727	196559518
PT1_Y11.4	chr3	196805652	3'	-	196805546	106	intron	NM_001204388	DLG1	-	196769430	197025447
PT1_Y11.4	chr3	196805647	5'	+	196805894	247	intron	NM_001204388	DLG1	-	196769430	197025447
PT4_Y12.2	chr4	135174	3'	-	134965	209	intron	NM_001039127	ZNF718	+	53276	156490
PT1_Y11.4	chr4	348186	5'	-	348039	147	intron	NM_003441	ZNF141	+	331595	367691
PT1_Y11.4	chr4	928788	5'	-	928709	79	intron	NM_032326	TMEM175	+	926261	952443
PT5_Y14.5	chr4	947514	3'	-	947445	69	intron	NM_032326	TMEM175	+	926261	952443
PT4_Y12.2	chr4	980310	3'	+	980423	113	intron	NM_134425	SLC26A1	-	972862	987183
PT4_Y12.2	chr4	1181652	3'	+	1181820	168	7918	NR_024569	LOC1001308	-	1189570	1202750
PT1_Y11.4	chr4	1319252	3'	+	1319601	349	intron	NM_005882	MAEA	+	1283671	1333925
PT1_Y11.4	chr4	2000347	5'	-	2000235	112	intron	NM_005663	WHSC2	-	1984440	2010962
PT4_Y12.2	chr4	20732380	3'	-	20732126	254	intron	NM_147181	KCNIP4	-	20730238	21546279
PT1_Y4.8	chr4	24550456	3'	-	24550355	101	intron	NM_001358	DHX15	-	24529087	24586184
PT1_Y0.2	chr4	25842215	3'	-	25842134	81	intron	NM_015187	SEL1L3	-	25749048	25864610
PT1_Y11.4	chr4	27421755	5'	-	27421733	22	394752	NM_001169118	STIM2	+	26862312	27027003
PT4_Y12.2	chr4	36203660	3'	+	36203809	149	intron	NM_015230	ARAP2	+	36067619	36245979
PT3_Y7.2	chr4	36275803	3'	+	36275832	29	7440	NM_001136536	DTHD1	+	36283243	36347378
PT1_Y11.4	chr4	39731056	3'	-	39730998	58	intron	NM_005339	UBE2K	+	39699663	39784410
PT1_Y11.4	chr4	39875950	3'	+	39876021	71	exon	NM_001100399	PD55A	-	39824482	39979576
PT3_Y0	chr4	39915472	3'	+	39915658	186	intron	NM_001100399	PD55A	-	39824482	39979576
PT3_Y7.2	chr4	41944481	5'	-	41944291	190	intron	NM_018126	TMEM33	+	41937136	41962824
PT1_Y0.2	chr4	42006195	5'	-	42005944	251	intron	NM_006345	SLC30A9	+	41992522	42089551
PT4_Y12.2	chr4	48115976	3'	+	48116092	116	intron	NM_003328	TXK	-	48068409	48136273
PT1_Y11.4	chr4	48176597	3'	+	48176622	25	intron	NM_003215	TEC	-	48137799	48271814
PT1_Y11.4	chr4	48613270	3'	-	48613119	151	intron	NM_015030	FRYL	-	48499379	48782316
PT1_Y11.4	chr4	48613271	3'	-	48613173	98	intron	NM_015030	FRYL	-	48499379	48782316
PT3_Y7.2	chr4	57776708	3'	+	57776765	57	intron	NM_005612	REST	+	57774041	57802010
PT3_Y7.2	chr4	76522819	3'	-	76522703	116	intron	NM_003948	CDKL2	-	76501703	76555721
PT1_Y0.2	chr4	78737281	5'	+	78737344	63	intron	NM_144571	CNOT6L	-	78634540	78740544
PT1_Y0.2	chr4	79720629	3'	+	79720885	256	intron	NM_198892	BMP2K	+	79697531	79800594
PT1_Y0.2	chr4	82411700	3'	+	82411938	238	18639	NM_152545	RASGEF1B	-	82348218	82393061
PT1_Y0.2	chr4	84147160	3'	+	84147542	382	37816	NM_015697	COQ2	-	84184976	84206067
PT5_Y14.5	chr4	89388421	3'	+	89388462	41	intron	NM_016323	HERC5	+	89378267	89427314
PT4_Y12.2	chr4	103429720	3'	-	103429626	94	intron	NM_003998	NFKB1	+	103422485	103538459
PT1_Y11.4	chr4	103728896	3'	-	103728834	62	intron	NM_181893	UBE2D3	-	103717132	103749105
PT1_Y11.4	chr4	104785620	3'	+	104785646	26	144647	NM_001059	TACR3	-	104510624	104640973
PT2_Y12.9	chr4	106351832	3'	-	106351707	125	intron	NM_176869	PPA2	-	106290233	106395227
PT1_Y0.2	chr4	107146594	5'	+	107146635	41	intron	NM_001163435	TBCK	-	106967232	107237861
PT1_Y0.2	chr4	107146594	5'	+	107146629	35	intron	NM_001163435	TBCK	-	106967232	107237861
PT1_Y0.2	chr4	107146594	5'	+	107146624	30	intron	NM_001163435	TBCK	-	106967232	107237861
PT1_Y0.2	chr4	109010813	5'	-	109010742	71	intron	NM_016269	LEF1	-	108968700	109087953
PT1_Y11.4	chr4	113175851	3'	-	113175535	316	intron	NM_018569	AP1AR	+	113152894	113191211
PT1_Y11.4	chr4	113175851	3'	-	113175758	93	intron	NM_018569	AP1AR	+	113152894	113191211
PT1_Y11.4	chr4	113175851	3'	-	113175819	32	intron	NM_018569	AP1AR	+	113152894	113191211
PT1_Y11.4	chr4	113175851	3'	-	113175825	26	intron	NM_018569	AP1AR	+	113152894	113191211
PT1_Y11.4	chr4	123819447	3'	-	123819317	130	intron	NM_198041	NUDT6	-	123813798	123843759
PT2_Y12.9	chr4	143265241	3'	-	143265078	163	intron	NM_001101669	INPP4B	-	142949181	143767604
PT3_Y7.2	chr4	143619341	3'	-	143619316	25	intron	NM_001101669	INPP4B	-	142949181	143767604
PT1_Y11.4	chr4	147352144	5'	+	147352349	205	intron	NM_001029998	SLC10A7	-	147175136	147443123
PT1_Y4.8	chr4	147393213	3'	+	147393395	182	intron	NM_001029998	SLC10A7	-	147175136	147443123
PT1_Y11.4	chr4	148642310	5'	-	148642069	241	11142	NM_024605	ARHGAP10	+	148653452	148993927
PT1_Y11.4	chr4	148852044	3'	+	148852318	274	intron	NM_024605	ARHGAP10	+	148653452	148993927
PT1_Y11.4	chr4	151248182	5'	+	151248238	56	intron	NM_001199282	LRBA	-	151185595	151936649
PT1_Y0.2	chr4	153257937	5'	-	153257892	45	intron	NM_033632	FBXW7	-	153242409	153274110
PT1_Y0.2	chr4	153449909	3'	-	153449882	27	7506	NR_033797	DKFZP434I0	+	153457415	153460415

PT1_Y4.8	chr4	154399679	5'	+	154399855	176	intron	NM_001131007	KIAA0922	+	154387497	154557862
PT3_Y7.2	chr4	154435233	3'	+	154435481	248	intron	NM_001131007	KIAA0922	+	154387497	154557862
PT1_Y11.4	chr4	154453089	3'	+	154453125	36	intron	NM_001131007	KIAA0922	+	154387497	154557862
PT1_Y11.4	chr5	9319640	3'	+	9319821	181	intron	NM_003966	SEMA5A	-	9035137	9546233
PT1_Y11.4	chr5	31138107	5'	-	31138087	20	55654	NM_004932	CDH6	+	31193761	31329253
PT1_Y11.4	chr5	31553953	5'	+	31554064	111	exon	NM_018356	C5orf22	+	31532372	31555165
PT1_Y11.4	chr5	31553958	3'	-	31553853	105	exon	NM_018356	C5orf22	+	31532372	31555165
PT1_Y0.2	chr5	39079216	5'	-	39079117	99	4715	NM_152756	RICTOR	-	38938021	39074501
PT1_Y0.2	chr5	39167116	3'	-	39166969	147	intron	NM_001465	FYB	-	39105353	39270759
PT1_Y0.2	chr5	39167116	3'	-	39167057	59	intron	NM_001465	FYB	-	39105353	39270759
PT1_Y0.2	chr5	39167111	5'	+	39167449	338	intron	NM_001465	FYB	-	39105353	39270759
PT1_Y0.2	chr5	39167111	5'	+	39167313	202	intron	NM_001465	FYB	-	39105353	39270759
PT1_Y0.2	chr5	39167111	5'	+	39167155	44	intron	NM_001465	FYB	-	39105353	39270759
PT1_Y0.2	chr5	39167111	5'	+	39167145	34	intron	NM_001465	FYB	-	39105353	39270759
PT1_Y11.4	chr5	40254713	3'	+	40254964	251	425318	NM_000958	PTGER4	+	40680031	40693837
PT1_Y11.4	chr5	49964706	5'	+	49964780	74	intron	NM_001178055	PARP8	+	49961732	50142356
PT1_Y11.4	chr5	50035002	5'	+	50035240	238	intron	NM_001178055	PARP8	+	49961732	50142356
PT1_Y11.4	chr5	50035002	5'	+	50035146	144	intron	NM_001178055	PARP8	+	49961732	50142356
PT1_Y11.4	chr5	50035002	5'	+	50035279	277	intron	NM_001178055	PARP8	+	49961732	50142356
PT1_Y4.8	chr5	50035002	5'	+	50035182	180	intron	NM_001178055	PARP8	+	49961732	50142356
PT1_Y0.2	chr5	50035002	5'	+	50035033	31	intron	NM_001178055	PARP8	+	49961732	50142356
PT1_Y11.4	chr5	55271643	3'	-	55271600	43	intron	NM_175767	IL6ST	-	55230924	55290821
PT4_Y12.2	chr5	55309350	3'	-	55309279	71	18529	NM_175767	IL6ST	-	55230924	55290821
PT1_Y11.4	chr5	59447100	3'	-	59447021	79	336439	NR_024617	PART1	+	59783539	59822245
PT1_Y11.4	chr5	61733172	3'	-	61733004	168	exon	NM_016338	IPO11	+	61708572	61924416
PT1_Y11.4	chr5	68203406	3'	+	68203573	167	186375	NM_024055	SLC30A5	+	68389781	68426899
PT1_Y11.4	chr5	68203411	5'	-	68203309	102	186370	NM_024055	SLC30A5	+	68389781	68426899
PT4_Y12.2	chr5	70764843	3'	-	70764769	74	intron	NM_018429	BDP1	+	70751441	70863649
PT1_Y11.4	chr5	77523828	5'	-	77523721	107	intron	NM_003664	AP3B1	-	77298149	77590528
PT1_Y11.4	chr5	78920150	5'	-	78919893	257	intron	NM_001114393	PAPD4	+	78908242	78982471
PT1_Y11.4	chr5	78949174	3'	+	78949204	30	intron	NM_001114393	PAPD4	+	78908242	78982471
PT1_Y11.4	chr5	79532851	3'	-	79532774	77	intron	NM_001174071	SERINC5	-	79407049	79551898
PT1_Y0.2	chr5	79770868	3'	-	79770519	349	intron	NM_001105251	ZFYVE16	+	79703837	79775498
PT1_Y11.4	chr5	79993939	3'	-	79993881	58	intron	NM_002439	MSH3	+	79950293	80172634
PT1_Y11.4	chr5	80066395	3'	+	80066628	233	intron	NM_002439	MSH3	+	79950293	80172634
PT4_Y12.2	chr5	80383783	5'	+	80383984	201	intron	NM_006909	RASGRF2	+	80256557	80521953
PT1_Y0.2	chr5	90673903	3'	+	90674345	442	intron	NM_020801	ARRDC3	-	90664540	90679149
PT1_Y11.4	chr5	93416284	3'	-	93416167	117	intron	NM_001163417	FAM172A	-	92953430	93447404
PT3_Y7.2	chr5	94015987	3'	+	94016071	84	intron	NM_032290	ANKRD32	+	93954390	94031573
PT1_Y11.4	chr5	94877080	3'	+	94877195	115	exon	NM_014639	TTC37	-	94799598	94890709
PT1_Y11.4	chr5	94877080	3'	+	94877131	51	exon	NM_014639	TTC37	-	94799598	94890709
PT1_Y11.4	chr5	94877080	3'	+	94877114	34	exon	NM_014639	TTC37	-	94799598	94890709
PT1_Y11.4	chr5	98213753	5'	+	98213781	28	intron	NM_001270	CHD1	-	98190907	98262238
PT1_Y0.2	chr5	109702534	3'	+	109702783	249	52663	NM_001039763	TMEM232	-	109755197	110062450
PT3_Y7.2	chr5	112876468	3'	-	112876075	393	intron	NM_022828	YTHDC2	+	112849390	112930984
PT1_Y11.4	chr5	118684128	5'	+	118684205	77	intron	NM_001077654	TNFAIP8	+	118604417	118730294
PT4_Y12.2	chr5	125780195	3'	-	125780120	75	intron	NM_001146319	GRAMD3	+	125695787	125829853
PT3_Y7.2	chr5	130678766	3'	-	130678736	30	intron	NM_001038702	CDC42SE2	+	130599701	130730382
PT1_Y11.4	chr5	130686449	5'	-	130686411	38	intron	NM_001038702	CDC42SE2	+	130599701	130730382
PT1_Y11.4	chr5	130695902	5'	-	130695747	155	intron	NM_001038702	CDC42SE2	+	130599701	130730382
PT1_Y11.4	chr5	130826440	3'	-	130826299	141	intron	NM_001164388	RAPGEF6	-	130759613	130970929
PT1_Y11.4	chr5	131929290	3'	-	131928914	376	intron	NM_005732	RAD50	+	131892615	131980313
PT1_Y11.4	chr5	131929290	3'	-	131929185	105	intron	NM_005732	RAD50	+	131892615	131980313
PT1_Y11.4	chr5	132391453	3'	-	132391387	66	intron	NM_002154	HSPA4	+	132387661	132440709
PT1_Y11.4	chr5	132391448	5'	+	132391606	158	intron	NM_002154	HSPA4	+	132387661	132440709
PT1_Y11.4	chr5	133708703	3'	-	133708563	140	intron	NM_003337	UBE2B	+	133706869	133727799
PT1_Y11.4	chr5	133708703	3'	-	133708569	134	intron	NM_003337	UBE2B	+	133706869	133727799
PT1_Y11.4	chr5	135512657	3'	+	135512710	53	intron	NM_005903	SMAD5	+	135468535	135518422
PT4_Y12.2	chr5	138977164	3'	+	138977377	213	intron	NM_181838	UBE2D2	+	138940750	139008018
PT4_Y12.2	chr5	138977164	3'	+	138977368	204	intron	NM_181838	UBE2D2	+	138940750	139008018
PT4_Y12.2	chr5	138977164	3'	+	138977345	181	intron	NM_181838	UBE2D2	+	138940750	139008018
PT4_Y12.2	chr5	138977164	3'	+	138977310	146	intron	NM_181838	UBE2D2	+	138940750	139008018
PT4_Y12.2	chr5	138977164	3'	+	138977271	107	intron	NM_181838	UBE2D2	+	138940750	139008018
PT4_Y12.2	chr5	138977164	3'	+	138977255	91	intron	NM_181838	UBE2D2	+	138940750	139008018
PT4_Y12.2	chr5	138977164	3'	+	138977244	80	intron	NM_181838	UBE2D2	+	138940750	139008018



PT4_Y12.2	chr5	138977164	3'	+	138977238	74	intron	NM_181838	UBE2D2	+	138940750	139008018
PT4_Y12.2	chr5	138977164	3'	+	138977232	68	intron	NM_181838	UBE2D2	+	138940750	139008018
PT4_Y12.2	chr5	138977164	3'	+	138977228	64	intron	NM_181838	UBE2D2	+	138940750	139008018
PT4_Y12.2	chr5	138977164	3'	+	138977219	55	intron	NM_181838	UBE2D2	+	138940750	139008018
PT4_Y12.2	chr5	138977164	3'	+	138977214	50	intron	NM_181838	UBE2D2	+	138940750	139008018
PT4_Y12.2	chr5	138977164	3'	+	138977196	32	intron	NM_181838	UBE2D2	+	138940750	139008018
PT1_Y0.2	chr5	139853110	3'	+	139853378	268	intron	NM_017747	ANKHD1	+	139781398	139919441
PT5_Y14.5	chr5	141485741	3'	-	141485626	115	2582	NM_030571	NDFIP1	+	141488323	141534008
PT1_Y11.4	chr5	142773615	3'	+	142773651	36	intron	NM_000176	NR3C1	-	142657495	142783254
PT1_Y11.4	chr5	142773620	5'	-	142773500	120	intron	NM_000176	NR3C1	-	142657495	142783254
PT1_Y0.2	chr5	156705202	3'	+	156705248	46	intron	NM_001037333	CYFIP2	+	156693090	156822606
PT1_Y11.4	chr5	162896981	5'	-	162896825	156	intron	NM_001142557	HMMR	+	162887516	162918953
PT1_Y11.4	chr5	162896981	5'	-	162896886	95	intron	NM_001142557	HMMR	+	162887516	162918953
PT3_Y0	chr5	171496450	3'	+	171496529	79	intron	NM_005990	STK10	-	171469073	171615346
PT3_Y7.2	chr5	175888908	3'	-	175888604	304	intron	NM_014613	FAF2	+	175875355	175937075
PT1_Y0.2	chr5	176580379	5'	-	176580220	159	intron	NM_172349	NSD1	+	176560079	176727214
PT5_Y14.5	chr5	176596334	3'	-	176596089	245	intron	NM_172349	NSD1	+	176560079	176727214
PT5_Y14.5	chr5	176596334	3'	-	176596237	97	intron	NM_172349	NSD1	+	176560079	176727214
PT1_Y11.4	chr5	176621515	3'	+	176621576	61	intron	NM_172349	NSD1	+	176560079	176727214
PT1_Y11.4	chr5	176621515	3'	+	176621560	45	intron	NM_172349	NSD1	+	176560079	176727214
PT1_Y11.4	chr5	176708256	3'	-	176708212	44	intron	NM_172349	NSD1	+	176560079	176727214
PT1_Y11.4	chr5	176708256	3'	-	176708216	40	intron	NM_172349	NSD1	+	176560079	176727214
PT1_Y11.4	chr5	178246398	5'	+	178246419	21	40555	NM_058230	ZNF354B	+	178286953	178311424
PT1_Y11.4	chr5	179135417	5'	-	179135239	178	intron	NM_001024649	CANX	+	179125929	179158639
PT1_Y11.4	chr5	180401794	5'	-	180401679	115	14050	NM_197975	BTNL3	+	180415844	180433727
PT1_Y0.2	chr5	180401789	3'	+	180401816	27	14055	NM_197975	BTNL3	+	180415844	180433727
PT1_Y11.4	chr5	180682940	5'	+	180683016	76	445	NM_032765	TRIM52	-	180683385	180688119
PT1_Y0.2	chr6	618335	3'	+	618526	191	intron	NM_018303	EXOC2	-	485137	693109
PT1_Y0.2	chr6	5549091	3'	-	5549033	58	intron	NM_006567	FARS2	+	5261583	5771816
PT4_Y12.2	chr6	11716795	3'	+	11716880	85	intron	NM_001143948	C6orf105	-	11713887	11779280
PT4_Y12.2	chr6	11716795	3'	+	11716864	69	intron	NM_001143948	C6orf105	-	11713887	11779280
PT4_Y12.2	chr6	11716795	3'	+	11716846	51	intron	NM_001143948	C6orf105	-	11713887	11779280
PT1_Y11.4	chr6	12097611	3'	-	12097525	86	intron	NM_002114	HIVEP1	+	12012723	12165232
PT1_Y11.4	chr6	12097612	3'	-	12097523	89	intron	NM_002114	HIVEP1	+	12012723	12165232
PT1_Y11.4	chr6	14693616	3'	+	14693682	66	552910	NM_004973	JARID2	+	15246526	15522253
PT3_Y0	chr6	15603556	3'	+	15603584	28	intron	NM_032122	DTNBP1	-	15523031	15663289
PT1_Y11.4	chr6	17654159	5'	+	17654181	22	intron	NM_005124	NUP153	-	17615268	17706818
PT1_Y4.8	chr6	17713350	5'	-	17713226	124	6532	NM_005124	NUP153	-	17615268	17706818
PT1_Y11.4	chr6	20565473	3'	+	20565819	346	intron	NM_017774	CDKAL1	+	20534687	21232634
PT1_Y11.4	chr6	20704413	5'	+	20704602	189	intron	NM_017774	CDKAL1	+	20534687	21232634
PT1_Y11.4	chr6	20704413	5'	+	20704595	182	intron	NM_017774	CDKAL1	+	20534687	21232634
PT1_Y0.2	chr6	24861526	5'	-	24861453	73	intron	NM_014722	FAM65B	-	24804512	24877583
PT1_Y11.4	chr6	25456566	5'	+	25456658	92	intron	NM_001173977	LRRC16A	+	25279655	25620758
PT1_Y11.4	chr6	25456567	5'	+	25456656	89	intron	NM_001173977	LRRC16A	+	25279655	25620758
PT1_Y4.8	chr6	25980295	3'	+	25980334	39	intron	NM_006355	TRIM38	+	25963070	25985352
PT4_Y12.2	chr6	26126598	3'	+	26126840	242	1680	NM_003512	HIST1H2AC	+	26124372	26124918
PT1_Y11.4	chr6	26129407	3'	+	26129432	25	4489	NM_003512	HIST1H2AC	+	26124372	26124918
PT1_Y11.4	chr6	26229180	3'	+	26229204	24	3336	NM_003532	HIST1H3E	+	26225382	26225844
PT1_Y0.2	chr6	26408131	3'	-	26407892	239	exon	NM_001145009	BTN3A1	+	26402464	26415444
PT1_Y11.4	chr6	26446751	3'	-	26446673	78	intron	NM_006994	BTN3A3	+	26440699	26453643
PT1_Y0.2	chr6	26524397	3'	-	26524280	117	exon	NR_026790	HCG11	+	26521933	26527612
PT1_Y11.4	chr6	27682327	5'	+	27682420	93	5391	NR_038293	LOC1005071	+	27661813	27676936
PT1_Y11.4	chr6	27796637	3'	+	27796753	116	2314	NM_003541	HIST1H4K	-	27798951	27799305
PT1_Y11.4	chr6	29866707	3'	+	29866830	123	7851	NR_001434	HLA-H	+	29855382	29858856
PT1_Y11.4	chr6	29986861	3'	-	29986824	37	intron	NR_026751	ZNRD1-AS1	-	29968787	30028961
PT1_Y11.4	chr6	29990060	3'	-	29989875	185	intron	NR_026751	ZNRD1-AS1	-	29968787	30028961
PT3_Y0	chr6	30471478	3'	-	30471430	48	9496	NM_005516	HLA-E	+	30457182	30461982
PT3_Y0	chr6	30481556	3'	-	30481486	70	19574	NM_005516	HLA-E	+	30457182	30461982
PT1_Y11.4	chr6	30526518	3'	-	30526421	97	intron	NM_001077497	PRR3	+	30524485	30532473
PT1_Y11.4	chr6	30526518	3'	-	30526427	91	intron	NM_001077497	PRR3	+	30524485	30532473
PT5_Y14.5	chr6	30542833	3'	-	30542713	120	intron	NM_001090	ABCF1	+	30539169	30559309
PT1_Y11.4	chr6	30548932	3'	+	30549129	197	intron	NM_001090	ABCF1	+	30539169	30559309
PT5_Y14.5	chr6	30579734	3'	-	30579691	43	intron	NM_002714	PPP1R10	-	30568181	30585020
PT4_Y12.2	chr6	30579798	3'	-	30579774	24	intron	NM_002714	PPP1R10	-	30568181	30585020
PT4_Y12.2	chr6	30787866	3'	-	30787754	112	63994	NM_001954	DDR1	+	30851860	30867933

PT1_Y11.4	chr6	31131661	3'	-	31131456	205	exon	NM_001077511	TCF19	+	31126302	31131992
PT1_Y11.4	chr6	31131656	5'	+	31131774	118	exon	NM_001077511	TCF19	+	31126302	31131992
PT1_Y11.4	chr6	31327204	5'	+	31327239	35	2215	NM_005514	HLA-B	-	31321648	31324989
PT1_Y11.4	chr6	31537625	3'	-	31537551	74	2250	NM_001159740	LTA	+	31539875	31542098
PT1_Y0.2	chr6	31700469	3'	-	31700236	233	intron	NM_001288	CLIC1	-	31698357	31704341
PT3_Y7.2	chr6	32828370	5'	+	32828492	122	742	NM_002800	PSMB9	+	32821937	32827628
PT3_Y7.2	chr6	32830785	3'	-	32830569	216	3157	NM_002800	PSMB9	+	32821937	32827628
PT1_Y11.4	chr6	32867472	3'	+	32867655	183	intron	NR_037177	LOC1002941	+	32861952	32871535
PT5_Y14.5	chr6	32926762	3'	+	32926815	53	5863	NM_006120	HLA-DMA	-	32916390	32920899
PT5_Y14.5	chr6	32950881	3'	-	32950684	197	1599	NM_005104	BRD2	+	32936436	32949282
PT3_Y0	chr6	33226084	3'	+	33226334	250	intron	NM_022553	VPS52	-	33218048	33239662
PT3_Y7.2	chr6	33269476	3'	-	33269388	88	exon	NM_172209	TAPBP	-	33267471	33282164
PT1_Y11.4	chr6	33278341	3'	-	33278299	42	intron	NM_172209	TAPBP	-	33267471	33282164
PT1_Y11.4	chr6	34304897	5'	+	34304979	82	intron	NM_006703	NUDT3	-	34254972	34360457
PT1_Y11.4	chr6	34647892	3'	-	34647809	83	intron	NM_024294	C6orf106	-	34555065	34664625
PT1_Y0.2	chr6	34653953	3'	-	34653922	31	intron	NM_024294	C6orf106	-	34555065	34664625
PT1_Y0.2	chr6	35553071	5'	+	35553108	37	intron	NM_004117	FKBP5	-	35541361	35656719
PT1_Y11.4	chr6	35567456	3'	-	35567311	145	intron	NM_004117	FKBP5	-	35541361	35656719
PT1_Y11.4	chr6	35567457	3'	-	35567309	148	intron	NM_004117	FKBP5	-	35541361	35656719
PT1_Y11.4	chr6	35626433	3'	-	35626395	38	intron	NM_004117	FKBP5	-	35541361	35656719
PT2_Y12.9	chr6	35649004	3'	+	35649178	174	intron	NM_004117	FKBP5	-	35541361	35656719
PT5_Y14.5	chr6	36564436	3'	-	36564205	231	intron	NM_003017	SRSF3	+	36562089	36572244
PT1_Y11.4	chr6	36851286	3'	+	36851364	78	2353	NM_152734	C6orf89	+	36853639	36896740
PT1_Y11.4	chr6	36851291	3'	-	36851149	142	2348	NM_152734	C6orf89	+	36853639	36896740
PT1_Y11.4	chr6	37432600	3'	+	37432678	78	intron	NM_015050	FTSJ2	+	37400906	37449284
PT1_Y11.4	chr6	38207629	5'	+	38207725	96	intron	NM_001099272	BTBD9	-	38136226	38563843
PT1_Y11.4	chr6	38543424	3'	-	38543292	132	intron	NM_001099272	BTBD9	-	38136226	38563843
PT1_Y11.4	chr6	38543425	3'	-	38543176	249	intron	NM_001099272	BTBD9	-	38136226	38563843
PT1_Y11.4	chr6	38543425	3'	-	38543184	241	intron	NM_001099272	BTBD9	-	38136226	38563843
PT1_Y11.4	chr6	38543425	3'	-	38543289	136	intron	NM_001099272	BTBD9	-	38136226	38563843
PT1_Y11.4	chr6	38543425	3'	-	38543382	43	intron	NM_001099272	BTBD9	-	38136226	38563843
PT1_Y0.2	chr6	41960772	3'	+	41961039	267	51220	NM_001136017	CCND3	-	41902670	41909552
PT1_Y11.4	chr6	42756261	3'	-	42756102	159	32532	NM_015349	KIAA0240	+	42788793	42836296
PT5_Y14.5	chr6	43002398	3'	-	43002066	332	2956	NM_014780	CUL7	-	43005354	43021683
PT5_Y14.5	chr6	43567531	3'	-	43567448	83	intron	NM_006502	POLH	+	43543877	43588260
PT4_Y12.2	chr6	45399204	3'	-	45399071	133	intron	NM_001024630	RUNX2	+	45296053	45518819
PT4_Y12.2	chr6	52878088	3'	-	52877816	272	intron	NM_014920	ICK	-	52866097	52926600
PT4_Y12.2	chr6	57289869	3'	-	57289756	113	intron	NM_000947	PRIM2	+	57182421	57513376
PT3_Y7.2	chr6	69785326	3'	+	69785394	68	intron	NM_001704	BAI3	+	69345631	70099403
PT5_Y14.5	chr6	79675187	3'	+	79675403	216	intron	NM_017934	PHIP	-	79644135	79788011
PT5_Y14.5	chr6	87934079	3'	+	87934235	156	intron	NM_015021	ZNF292	+	87865268	87973406
PT1_Y0.2	chr6	90563739	5'	+	90563831	92	intron	NM_001137668	CASP8AP2	+	90539618	90584155
PT1_Y11.4	chr6	90720842	5'	+	90721036	194	intron	NM_021813	BACH2	-	90636246	91006627
PT1_Y11.4	chr6	90720842	5'	+	90720875	33	intron	NM_021813	BACH2	-	90636246	91006627
PT1_Y11.4	chr6	90721872	5'	+	90721937	65	intron	NM_021813	BACH2	-	90636246	91006627
PT1_Y11.4	chr6	90721872	5'	+	90721921	49	intron	NM_021813	BACH2	-	90636246	91006627
PT1_Y11.4	chr6	90725892	5'	+	90726270	378	intron	NM_021813	BACH2	-	90636246	91006627
PT1_Y11.4	chr6	90725892	5'	+	90726025	133	intron	NM_021813	BACH2	-	90636246	91006627
PT1_Y11.4	chr6	90726875	3'	-	90726601	274	intron	NM_021813	BACH2	-	90636246	91006627
PT3_Y7.2	chr6	90729358	3'	-	90729204	154	intron	NM_021813	BACH2	-	90636246	91006627
PT1_Y11.4	chr6	90730830	5'	+	90730860	30	intron	NM_021813	BACH2	-	90636246	91006627
PT1_Y11.4	chr6	90744822	3'	-	90744794	28	intron	NM_021813	BACH2	-	90636246	91006627
PT1_Y11.4	chr6	90745668	3'	-	90745493	175	intron	NM_021813	BACH2	-	90636246	91006627
PT1_Y11.4	chr6	90745663	5'	+	90745813	150	intron	NM_021813	BACH2	-	90636246	91006627
PT1_Y11.4	chr6	90745663	5'	+	90745800	137	intron	NM_021813	BACH2	-	90636246	91006627
PT1_Y11.4	chr6	90750362	5'	+	90750447	85	intron	NM_021813	BACH2	-	90636246	91006627
PT1_Y11.4	chr6	90750362	5'	+	90750428	66	intron	NM_021813	BACH2	-	90636246	91006627
PT1_Y11.4	chr6	90750365	5'	+	90750444	79	intron	NM_021813	BACH2	-	90636246	91006627
PT1_Y11.4	chr6	90759962	5'	+	90760150	188	intron	NM_021813	BACH2	-	90636246	91006627
PT1_Y11.4	chr6	90783866	5'	+	90784175	309	intron	NM_021813	BACH2	-	90636246	91006627
PT1_Y11.4	chr6	90785962	5'	+	90786038	76	intron	NM_021813	BACH2	-	90636246	91006627
PT1_Y11.4	chr6	90786243	5'	+	90786401	158	intron	NM_021813	BACH2	-	90636246	91006627
PT1_Y11.4	chr6	90800858	3'	-	90800423	435	intron	NM_021813	BACH2	-	90636246	91006627
PT1_Y11.4	chr6	90804104	3'	-	90803964	140	intron	NM_021813	BACH2	-	90636246	91006627
PT1_Y11.4	chr6	90804099	5'	+	90804132	33	intron	NM_021813	BACH2	-	90636246	91006627

PT1_Y11.4	chr6	90804104	3'	-	90803825	279	intron	NM_021813	BACH2	-	90636246	91006627
PT1_Y0.2	chr6	90899777	3'	-	90899726	51	intron	NM_021813	BACH2	-	90636246	91006627
PT2_Y12.9	chr6	99369201	3'	+	99369277	76	intron	NM_012160	FBXL4	-	99321600	99395849
PT1_Y11.4	chr6	101249946	3'	+	101250076	130	intron	NM_006828	ASCC3	-	100956607	101329224
PT5_Y14.5	chr6	108930644	3'	+	108930667	23	intron	NM_201559	FOXO3	+	108881025	109005971
PT1_Y11.4	chr6	110261318	3'	+	110261406	88	38979	NM_005284	GPR6	+	110300297	110301924
PT1_Y11.4	chr6	110972532	5'	+	110972809	277	intron	NM_015076	CDK19	-	110931180	111136412
PT1_Y11.4	chr6	119176174	3'	+	119176434	260	intron	NM_017696	MCM9	-	119134611	119252903
PT1_Y11.4	chr6	119199418	3'	+	119199496	78	intron	NM_017696	MCM9	-	119134611	119252903
PT1_Y0.2	chr6	126222556	3'	+	126222705	149	intron	NM_001199620	NCOA7	+	126102306	126253176
PT1_Y11.4	chr6	129952125	5'	+	129952168	43	intron	NM_033515	ARHGAP18	-	129898239	130031370
PT1_Y11.4	chr6	129958010	5'	-	129957926	84	intron	NM_033515	ARHGAP18	-	129898239	130031370
PT1_Y11.4	chr6	131375756	3'	-	131375736	20	81069	NM_016377	AKAP7	+	131456825	131604675
PT1_Y11.4	chr6	135365969	3'	+	135366186	217	intron	NM_006620	HBS1L	-	135281516	135376036
PT3_Y7.2	chr6	136604960	3'	+	136605078	118	intron	NM_014739	BCLAF1	-	136578000	136610989
PT1_Y0.2	chr6	137069802	5'	+	137069965	163	intron	NM_005923	MAP3K5	-	136878186	137113656
PT1_Y11.4	chr6	144651568	5'	-	144651500	68	intron	NM_007124	UTRN	+	144612872	145174170
PT3_Y7.2	chr6	149407304	3'	+	149407428	124	9178	NM_005715	UST	+	149068270	149398126
PT3_Y7.2	chr6	149847786	3'	+	149847920	134	intron	NM_139126	PPIL4	-	149825630	149867238
PT1_Y11.4	chr6	150015152	3'	+	150015179	27	intron	NM_004690	LATS1	-	149982050	150039392
PT1_Y11.4	chr6	150093287	5'	+	150093390	103	intron	NM_005389	PCMT1	+	150070830	150132557
PT3_Y7.2	chr6	155487260	3'	-	155486948	312	intron	NM_012454	TIAM2	+	155411422	155578857
PT1_Y0.2	chr6	158655712	5'	+	158655758	46	35336	NM_207118	GTF2H5	+	158589378	158620376
PT1_Y11.4	chr6	164435296	5'	+	164435319	23	435668	NM_006775	QKI	+	163835674	163999628
PT1_Y11.4	chr6	165681829	5'	+	165681860	31	11323	NM_144980	C6orf118	-	165693152	165723111
PT1_Y11.4	chr6	167387798	3'	-	167387762	36	17721	NM_003730	RNASET2	-	167343003	167370077
PT1_Y11.4	chr6	170891487	5'	-	170891267	220	intron	NM_001199462	PDCD2	-	170884659	170893780
PT1_Y11.4	chr6	170891487	5'	-	170891275	212	intron	NM_001199462	PDCD2	-	170884659	170893780
PT1_Y11.4	chr7	2454313	5'	+	2454462	149	intron	NM_018641	CHST12	+	2443258	2474216
PT5_Y14.5	chr7	5804715	3'	+	5804938	223	intron	NM_207111	RNF216	-	5659671	5821361
PT1_Y0.2	chr7	7624684	3'	+	7624792	108	intron	NM_019005	MIOS	+	7606615	7647110
PT3_Y7.2	chr7	7635692	3'	+	7635841	149	intron	NM_019005	MIOS	+	7606615	7647110
PT5_Y14.5	chr7	7703008	3'	-	7702900	108	intron	NM_002947	RPA3	-	7676574	7758238
PT1_Y11.4	chr7	7787147	3'	-	7787120	27	intron	NR_034084	LOC729852	+	7680341	7918851
PT3_Y0	chr7	7795480	3'	+	7795744	264	intron	NR_034084	LOC729852	+	7680341	7918851
PT2_Y12.9	chr7	11179792	3'	-	11179627	165	intron	NM_014660	PHF14	+	11013498	11209250
PT1_Y11.4	chr7	11184354	3'	+	11184536	182	intron	NM_014660	PHF14	+	11013498	11209250
PT1_Y11.4	chr7	13960839	5'	-	13960761	78	intron	NM_001163147	ETV1	-	13930855	14031050
PT1_Y11.4	chr7	17880671	5'	-	17880457	214	intron	NM_015132	SNX13	-	17830384	17980131
PT1_Y0.2	chr7	17898509	3'	+	17898540	31	intron	NM_015132	SNX13	-	17830384	17980131
PT4_Y12.2	chr7	23028406	3'	-	23028293	113	intron	NM_032581	FAM126A	-	22980877	23053770
PT1_Y11.4	chr7	24858410	3'	+	24858612	202	intron	NM_145321	OSBPL3	-	24836163	25019760
PT1_Y11.4	chr7	24858415	5'	-	24858150	265	intron	NM_145321	OSBPL3	-	24836163	25019760
PT1_Y11.4	chr7	24871164	5'	-	24871107	57	intron	NM_145321	OSBPL3	-	24836163	25019760
PT1_Y11.4	chr7	24990855	5'	+	24990955	100	intron	NM_145321	OSBPL3	-	24836163	25019760
PT1_Y11.4	chr7	30349446	3'	-	30349404	42	intron	NM_147128	ZNRF2	+	30323922	30407308
PT1_Y11.4	chr7	30359729	3'	-	30359698	31	intron	NM_147128	ZNRF2	+	30323922	30407308
PT1_Y0.2	chr7	33074794	3'	-	33074520	274	intron	NM_016489	NT5C3	-	33053741	33080521
PT1_Y0.2	chr7	33074794	3'	-	33074566	228	intron	NM_016489	NT5C3	-	33053741	33080521
PT1_Y0.2	chr7	33074794	3'	-	33074681	113	intron	NM_016489	NT5C3	-	33053741	33080521
PT1_Y0.2	chr7	33074794	3'	-	33074692	102	intron	NM_016489	NT5C3	-	33053741	33080521
PT1_Y0.2	chr7	33074789	5'	+	33074984	195	intron	NM_016489	NT5C3	-	33053741	33080521
PT1_Y11.4	chr7	33230226	5'	-	33230038	188	intron	NM_014451	BBS9	+	33169151	33645680
PT2_Y12.9	chr7	38812538	3'	+	38812627	89	intron	NM_080631	VPS41	-	38763542	38948800
PT1_Y11.4	chr7	43715751	3'	-	43715505	246	intron	NM_018224	C7orf44	-	43678858	43769083
PT1_Y11.4	chr7	44661917	5'	-	44661766	151	intron	NM_002541	OGDH	+	44646120	44716195
PT1_Y11.4	chr7	44661917	5'	-	44661782	135	intron	NM_002541	OGDH	+	44646120	44716195
PT1_Y11.4	chr7	44868581	3'	-	44868529	52	exon	NM_138635	H2AFV	-	44866487	44887725
PT1_Y11.4	chr7	44868581	3'	-	44868539	42	exon	NM_138635	H2AFV	-	44866487	44887725
PT1_Y11.4	chr7	45101685	3'	+	45101717	32	intron	NR_030770	CCM2	+	45039344	45116069
PT1_Y0.2	chr7	50336516	3'	-	50336335	181	7861	NM_006060	IKZF1	+	50344377	50472798
PT1_Y11.4	chr7	64464932	3'	+	64465102	170	intron	NM_001007253	ERV3-1	-	64450732	64467124
PT4_Y12.2	chr7	64842158	5'	+	64842203	45	intron	NM_152626	ZNF92	+	64838767	64865998
PT1_Y0.2	chr7	72955698	3'	+	72955795	97	intron	NM_001197244	BCL7B	-	72950682	72971602
PT1_Y11.4	chr7	73239748	5'	-	73239728	20	5444	NM_001305	CLDN4	+	73245192	73247015

PT1_Y0.2	chr7	77537588	3'	-	77537305	283	intron	NM_001127360	PHTF2	+	77428108	77586821
PT5_Y14.5	chr7	86830193	3'	+	86830267	74	intron	NM_024315	C7orf23	-	86825477	86849031
PT1_Y11.4	chr7	87599365	3'	-	87598973	392	intron	NM_016351	ADAM22	+	87563565	87811428
PT1_Y11.4	chr7	92307560	3'	-	92307494	66	intron	NM_001259	CDK6	-	92234234	92465941
PT1_Y0.2	chr7	92382425	3'	+	92382733	308	intron	NM_001259	CDK6	-	92234234	92465941
PT1_Y0.2	chr7	92382425	3'	+	92382608	183	intron	NM_001259	CDK6	-	92234234	92465941
PT1_Y0.2	chr7	92382430	5'	-	92382263	167	intron	NM_001259	CDK6	-	92234234	92465941
PT1_Y0.2	chr7	92382430	5'	-	92382331	99	intron	NM_001259	CDK6	-	92234234	92465941
PT1_Y11.4	chr7	97087869	3'	-	97087816	53	273401	NM_013998	TAC1	+	97361270	97369784
PT1_Y4.8	chr7	98504670	3'	-	98504573	97	intron	NM_003496	TRRAP	+	98476112	98610864
PT1_Y11.4	chr7	98946277	5'	+	98946365	88	intron	NM_006409	ARPC1A	+	98923495	98963885
PT4_Y12.2	chr7	99093521	3'	+	99093563	42	intron	NM_032164	ZNF394	-	99090853	99097877
PT1_Y11.4	chr7	99161199	5'	+	99161313	114	intron	NM_001085366	ZNF655	+	99156044	99162328
PT1_Y11.4	chr7	99618357	5'	+	99618742	385	intron	NM_003439	ZKSCAN1	+	99613218	99635403
PT1_Y11.4	chr7	99618357	5'	+	99618731	374	intron	NM_003439	ZKSCAN1	+	99613218	99635403
PT3_Y7.2	chr7	99748035	3'	+	99748205	170	intron	NM_001008395	C7orf59	+	99746529	99751833
PT3_Y7.2	chr7	99809601	3'	-	99809452	149	intron	NM_012447	STAG3	+	99775537	99812010
PT1_Y11.4	chr7	99918523	3'	-	99918475	48	exon	NM_001004351	SPDYE3	+	99905324	99919819
PT4_Y12.2	chr7	99977926	3'	-	99977713	213	intron	NM_013439	PILRA	+	99971067	99997722
PT1_Y0.2	chr7	104666376	5'	-	104666325	51	intron	NM_018682	MLL5	+	104654636	104754532
PT1_Y11.4	chr7	104723884	3'	+	104723999	115	intron	NM_018682	MLL5	+	104654636	104754532
PT1_Y11.4	chr7	104723884	3'	+	104723961	77	intron	NM_018682	MLL5	+	104654636	104754532
PT1_Y11.4	chr7	104723889	5'	-	104723688	201	intron	NM_018682	MLL5	+	104654636	104754532
PT1_Y11.4	chr7	104723884	3'	+	104723955	71	intron	NM_018682	MLL5	+	104654636	104754532
PT4_Y12.2	chr7	104875224	3'	+	104875267	43	intron	NM_182691	SRPK2	-	104756822	105029341
PT1_Y0.2	chr7	105717174	3'	+	105717453	279	13777	NM_182715	SYPL1	-	105730951	105753057
PT1_Y11.4	chr7	107182854	5'	-	107182774	80	intron	NM_181733	COG5	-	106842188	107204959
PT1_Y4.8	chr7	107182849	3'	+	107183003	154	intron	NM_181733	COG5	-	106842188	107204959
PT3_Y7.2	chr7	114616620	3'	-	114616416	204	intron	NM_001166346	MDFIC	+	114562208	114659970
PT1_Y11.4	chr7	115861303	3'	+	115861626	323	intron	NM_015641	TES	+	115850546	115898837
PT2_Y12.9	chr7	120602370	3'	-	120602311	59	intron	NM_198267	ING3	+	120590816	120615711
PT1_Y0.2	chr7	127011534	3'	-	127011444	90	exon	NM_176814	ZNF800	-	127010353	127032767
PT1_Y0.2	chr7	129456358	3'	-	129456252	106	14214	NM_001202498	UBE2H	-	129470572	129592800
PT1_Y11.4	chr7	129497483	5'	-	129497446	37	intron	NM_001202498	UBE2H	-	129470572	129592800
PT2_Y12.9	chr7	129517105	3'	+	129517190	85	intron	NM_001202498	UBE2H	-	129470572	129592800
PT1_Y11.4	chr7	129586454	3'	+	129586762	308	intron	NM_001202498	UBE2H	-	129470572	129592800
PT1_Y11.4	chr7	129586454	3'	+	129586679	225	intron	NM_001202498	UBE2H	-	129470572	129592800
PT1_Y11.4	chr7	129586454	3'	+	129586488	34	intron	NM_001202498	UBE2H	-	129470572	129592800
PT1_Y11.4	chr7	129586459	5'	-	129586374	85	intron	NM_001202498	UBE2H	-	129470572	129592800
PT1_Y11.4	chr7	129586459	5'	-	129586379	80	intron	NM_001202498	UBE2H	-	129470572	129592800
PT1_Y11.4	chr7	129586459	5'	-	129586422	37	intron	NM_001202498	UBE2H	-	129470572	129592800
PT3_Y7.2	chr7	130859778	5'	-	130859636	142	intron	NM_001145354	MKLN1	+	130794854	131181398
PT1_Y11.4	chr7	139295573	5'	+	139295741	168	intron	NM_022740	HIPK2	-	139246315	139477693
PT1_Y4.8	chr7	139756502	3'	+	139756558	56	intron	NM_022750	PARP12	-	139723548	139763521
PT1_Y4.8	chr7	139756502	3'	+	139756524	22	intron	NM_022750	PARP12	-	139723548	139763521
PT3_Y7.2	chr7	139826967	3'	-	139826896	71	intron	NM_030647	JHDM1D	-	139784545	139876741
PT1_Y11.4	chr7	140465262	3'	-	140465234	28	intron	NM_004333	BRAF	-	140433812	140624564
PT3_Y7.2	chr7	143104764	3'	-	143104473	291	exon	NM_005232	EPHA1	-	143088204	143105985
PT1_Y11.4	chr7	146686373	3'	-	146686283	90	intron	NM_014141	CNTNAP2	+	145813452	148118088
PT4_Y12.2	chr7	150163000	3'	-	150162975	25	intron	NM_175571	GIMAP8	+	150147961	150176483
PT1_Y11.4	chr7	150181551	5'	-	150181483	68	5068	NM_175571	GIMAP8	+	150147961	150176483
PT1_Y11.4	chr7	150318113	5'	-	150318052	61	4350	NR_024115	GIMAP6	-	150322463	150329680
PT1_Y11.4	chr7	150318109	3'	+	150318292	183	4354	NR_024115	GIMAP6	-	150322463	150329680
PT1_Y11.4	chr7	150318109	3'	+	150318177	68	4354	NR_024115	GIMAP6	-	150322463	150329680
PT1_Y11.4	chr7	150318109	3'	+	150318153	44	4354	NR_024115	GIMAP6	-	150322463	150329680
PT1_Y4.8	chr7	150318109	3'	+	150318243	134	4354	NR_024115	GIMAP6	-	150322463	150329680
PT1_Y4.8	chr7	150318109	3'	+	150318162	53	4354	NR_024115	GIMAP6	-	150322463	150329680
PT4_Y12.2	chr7	150429661	3'	-	150429564	97	intron	NM_001199577	GIMAP1-GIM	+	150413644	150440737
PT4_Y12.2	chr7	150429656	5'	+	150429704	48	intron	NM_001199577	GIMAP1-GIM	+	150413644	150440737
PT1_Y11.4	chr7	152103525	5'	-	152103439	86	intron	NM_170606	MLL3	-	151832009	152133090
PT3_Y7.2	chr8	8196283	3'	+	8196618	335	intron	NM_001080826	SGK223	-	8175257	8239257
PT3_Y7.2	chr8	8196288	5'	-	8196241	47	intron	NM_001080826	SGK223	-	8175257	8239257
PT1_Y4.8	chr8	17802161	3'	+	17802255	94	intron	NM_006197	PCM1	+	17780365	17887457
PT1_Y0.2	chr8	17806298	5'	+	17806432	134	intron	NM_006197	PCM1	+	17780365	17887457
PT3_Y0	chr8	17808696	3'	-	17808317	379	intron	NM_006197	PCM1	+	17780365	17887457

PT4_Y12.2	chr8	22361652	3'	-	22361596	56	intron	NM_005605	PPP3CC	+	22298595	22398637
PT3_Y7.2	chr8	22363313	5'	+	22363340	27	intron	NM_005605	PPP3CC	+	22298595	22398637
PT1_Y0.2	chr8	23264245	5'	-	23264056	189	2523	NM_002318	LOXL2	-	23154409	23261722
PT4_Y12.2	chr8	29977903	3'	+	29977975	72	intron	NM_015344	LEPROTL1	+	29952921	29995222
PT1_Y11.4	chr8	33379351	5'	+	33379371	20	8648	NM_025115	C8orf41	-	33356235	33370703
PT1_Y11.4	chr8	38173023	5'	+	38173139	116	exon	NM_023034	WHSC1L1	-	38132560	38239790
PT1_Y11.4	chr8	41856274	5'	-	41856175	99	intron	NM_001099413	KAT6A	-	41786996	41909505
PT1_Y0.2	chr8	60017181	5'	+	60017499	318	intron	NM_014729	TOX	-	59717976	60031767
PT1_Y4.8	chr8	61594573	3'	-	61594396	177	intron	NM_017780	CHD7	+	61591323	61780586
PT1_Y0.2	chr8	61594573	3'	-	61594472	101	intron	NM_017780	CHD7	+	61591323	61780586
PT1_Y11.4	chr8	61831254	3'	-	61831108	146	47425	NR_034003	LOC1001307	-	61878679	61880307
PT3_Y7.2	chr8	65708697	3'	+	65708998	301	intron	NM_004820	CYP7B1	-	65508528	65711348
PT1_Y11.4	chr8	66636827	5'	+	66636962	135	intron	NM_002603	PDE7A	-	66626568	66753969
PT1_Y0.2	chr8	66720962	5'	-	66720882	80	intron	NM_002603	PDE7A	-	66626568	66753969
PT1_Y11.4	chr8	68139972	5'	-	68139810	162	intron	NM_006421	ARFGEF1	-	68109896	68255912
PT3_Y7.2	chr8	71211716	3'	+	71211746	30	intron	NM_006540	NCOA2	-	71024266	71316020
PT1_Y11.4	chr8	78575844	3'	-	78575693	151	662564	NM_001079867	PEX2	-	77892493	77913280
PT1_Y0.2	chr8	82438539	5'	-	82438480	59	intron	NM_001105281	FABP12	-	82437280	82443550
PT4_Y12.2	chr8	95754151	3'	-	95753827	324	intron	NM_181787	DPY19L4	+	95732102	95806076
PT3_Y7.2	chr8	95842756	3'	-	95842632	124	intron	NM_017864	INTS8	+	95835533	95892721
PT1_Y11.4	chr8	99748934	3'	+	99749006	72	intron	NM_006281	STK3	-	99466860	99837909
PT4_Y12.2	chr8	101961400	3'	+	101961551	151	intron	NM_001135701	YWHAZ	-	101930803	101962799
PT1_Y11.4	chr8	103397214	5'	+	103397272	58	intron	NM_015902	UBR5	-	103264501	103424917
PT1_Y4.8	chr8	105558404	3'	-	105558346	58	intron	NM_001135703	LRP12	-	105501458	105601252
PT1_Y11.4	chr8	116270149	3'	-	116269991	158	150574	NM_014112	TRPS1	-	116420723	116681228
PT1_Y11.4	chr8	117680357	3'	+	117680473	116	intron	NM_003756	EIF3H	-	117657054	117768062
PT1_Y11.4	chr8	124547911	5'	+	124548125	214	3528	NM_058229	FBXO32	-	124510126	124544383
PT2_Y12.9	chr8	124795518	3'	+	124795699	181	intron	NM_144963	FAM91A1	+	124780881	124827690
PT1_Y11.4	chr8	126012090	3'	+	126012208	118	intron	NM_003129	SQLE	+	126010719	126034525
PT1_Y0.2	chr8	126012090	3'	+	126012261	171	intron	NM_003129	SQLE	+	126010719	126034525
PT1_Y11.4	chr8	129655369	5'	+	129655461	92	492935	NR_031613	MIR1208	+	129162361	129162434
PT4_Y12.2	chr8	131313827	3'	+	131314140	313	intron	NM_018482	ASAP1	-	131064352	131414217
PT1_Y0.2	chr8	133794159	3'	+	133794348	189	intron	NM_016018	PHF20L1	+	133787603	133825439
PT1_Y11.4	chr8	133795826	5'	+	133796020	194	intron	NM_016018	PHF20L1	+	133787603	133825439
PT1_Y11.4	chr8	141386021	5'	-	141385802	219	intron	NM_031466	TRAPPC9	-	140742585	141467861
PT1_Y11.4	chr8	141435876	3'	+	141436128	252	intron	NM_031466	TRAPPC9	-	140742585	141467861
PT1_Y11.4	chr8	145264509	3'	+	145264578	69	intron	NM_001099280	HEATR7A	+	145202918	145316843
PT3_Y7.2	chr8	145282221	3'	+	145282263	42	intron	NM_001099280	HEATR7A	+	145202918	145316843
PT1_Y11.4	chr8	145552800	3'	-	145552772	28	1653	NM_031309	SCRT1	-	145554453	145559943
PT3_Y7.2	chr8	145613294	3'	+	145613316	22	intron	NM_174922	ADCK5	+	145597730	145618453
PT3_Y0	chr8	145706371	3'	-	145706292	79	4653	NM_003923	FOXH1	-	145699114	145701718
PT1_Y0.2	chr8	145746371	5'	+	145746423	52	exon	NM_014665	LRRC14	+	145743362	145750559
PT1_Y11.4	chr8	145746807	5'	+	145746918	111	exon	NM_014665	LRRC14	+	145743362	145750559
PT1_Y11.4	chr8	145746808	5'	+	145746915	107	exon	NM_014665	LRRC14	+	145743362	145750559
PT1_Y0.2	chr8	145989631	3'	+	145989801	170	8661	NM_138367	ZNF251	-	145946293	145980970
PT1_Y11.4	chr8	146170620	3'	-	146170501	119	intron	NM_006958	ZNF16	-	146155743	146176274
PT1_Y4.8	chr8	146170620	3'	-	146170449	171	intron	NM_006958	ZNF16	-	146155743	146176274
PT5_Y14.5	chr8	146287378	3'	+	146287442	64	5962	NM_023080	C8orf33	+	146277823	146281416
PT1_Y0.2	chr9	225382	3'	-	225201	181	intron	NM_203447	DOCK8	+	214864	465259
PT1_Y11.4	chr9	5029630	3'	+	5029748	118	intron	NM_004972	JAK2	+	4985244	5128183
PT1_Y0.2	chr9	6001946	3'	-	6001845	101	intron	NM_001017969	KIAA2026	-	5919007	6008003
PT1_Y0.2	chr9	6001946	3'	-	6001866	80	intron	NM_001017969	KIAA2026	-	5919007	6008003
PT1_Y0.2	chr9	6001946	3'	-	6001876	70	intron	NM_001017969	KIAA2026	-	5919007	6008003
PT1_Y0.2	chr9	6001946	3'	-	6001910	36	intron	NM_001017969	KIAA2026	-	5919007	6008003
PT1_Y0.2	chr9	6001941	5'	+	6002012	71	intron	NM_001017969	KIAA2026	-	5919007	6008003
PT1_Y11.4	chr9	11500435	3'	+	11500459	24	887712	NM_130392	PTPRD	-	8314245	10612723
PT1_Y11.4	chr9	33021631	3'	+	33021711	80	3577	NM_001539	DNAJA1	+	33025208	33039062
PT3_Y0	chr9	33838529	3'	+	33838679	150	intron	NM_017811	UBE2R2	+	33817181	33920401
PT3_Y0	chr9	33963980	3'	+	33964037	57	intron	NM_018449	UBAP2	-	33921690	34048947
PT1_Y11.4	chr9	34203615	3'	-	34203431	184	intron	NM_001171204	UBAP1	+	34179002	34252521
PT1_Y0.2	chr9	36195215	5'	+	36195241	26	intron	NM_001076677	CLTA	+	36190852	36212059
PT2_Y12.9	chr9	36371871	3'	+	36371908	37	intron	NM_194330	RNF38	-	36336398	36400920
PT1_Y11.4	chr9	36377049	3'	+	36377193	144	intron	NM_194330	RNF38	-	36336398	36400920
PT1_Y11.4	chr9	44839980	5'	-	44839955	25	150255	NR_027421	FAM27C	+	44990235	44991492
PT1_Y11.4	chr9	77998950	3'	+	77999153	203	119561	NR_031679	MIR548H3	-	78118511	78338744

PT1_Y11.4	chr9	77998955	5'	-	77998919	36	119556	NR_031679	MIR548H3	-	78118511	78338744
PT1_Y11.4	chr9	78746298	3'	-	78746234	64	intron	NM_001190482	PCSK5	+	78505559	78808346
PT4_Y12.2	chr9	88529024	3'	+	88529115	91	27032	NM_024635	NAA35	+	88556056	88637217
PT1_Y11.4	chr9	92684321	5'	+	92684498	177	98614	NR_038882	LOC286370	-	92782935	92803781
PT1_Y0.2	chr9	94025834	3'	+	94025990	156	intron	NM_001698	AUH	-	93976096	94124206
PT5_Y14.5	chr9	95288554	3'	+	95288757	203	intron	NM_001197296	ECM2	-	95255828	95298374
PT1_Y11.4	chr9	96219534	3'	-	96219411	123	intron	NM_014612	FAM120A	+	96214172	96328397
PT3_Y7.2	chr9	98654262	3'	+	98654381	119	intron	NM_001010895	C9orf102	+	98637899	98731122
PT3_Y7.2	chr9	98654262	3'	+	98654309	47	intron	NM_001010895	C9orf102	+	98637899	98731122
PT1_Y11.4	chr9	98655543	3'	+	98655650	107	intron	NM_001010895	C9orf102	+	98637899	98731122
PT1_Y11.4	chr9	99234071	5'	+	99234095	24	intron	NM_014282	HABP4	+	99212413	99253618
PT1_Y11.4	chr9	115012006	3'	-	115011958	48	intron	NM_005156	ROD1	-	114980714	115095944
PT1_Y11.4	chr9	128427322	3'	-	128427197	125	intron	NM_024117	MAPKAP1	-	128199672	128469513
PT1_Y11.4	chr9	128634321	3'	+	128634508	187	intron	NM_006195	PBX3	+	128509616	128729655
PT1_Y0.2	chr9	130342689	3'	-	130342541	148	1421	NM_022833	FAM129B	-	130267617	130341268
PT3_Y7.2	chr9	130757002	5'	-	130756946	56	14190	NM_203305	FAM102A	-	130702860	130742812
PT1_Y11.4	chr9	130827432	3'	-	130827327	105	intron	NM_197956	NAIF1	-	130823511	130829599
PT1_Y11.4	chr9	130827432	3'	-	130827354	78	intron	NM_197956	NAIF1	-	130823511	130829599
PT1_Y11.4	chr9	130827432	3'	-	130827361	71	intron	NM_197956	NAIF1	-	130823511	130829599
PT1_Y11.4	chr9	130827432	3'	-	130827373	59	intron	NM_197956	NAIF1	-	130823511	130829599
PT1_Y11.4	chr9	131320636	3'	+	131320842	206	intron	NM_003127	SPTAN1	+	131314836	131395944
PT4_Y12.2	chr9	131342244	3'	-	131342153	91	intron	NM_003127	SPTAN1	+	131314836	131395944
PT1_Y11.4	chr9	131673742	3'	+	131673948	206	intron	NM_019594	LRRC8A	+	131644390	131680317
PT1_Y11.4	chr9	131718700	3'	-	131718526	174	exon	NM_015354	NUP188	+	131709976	131769374
PT1_Y11.4	chr9	131718700	3'	-	131718531	169	exon	NM_015354	NUP188	+	131709976	131769374
PT1_Y11.4	chr9	132698162	5'	+	132698225	63	intron	NM_015033	FNBP1	-	132649465	132805473
PT1_Y11.4	chr9	132776347	3'	+	132776452	105	intron	NM_015033	FNBP1	-	132649465	132805473
PT1_Y11.4	chr9	132776347	3'	+	132776446	99	intron	NM_015033	FNBP1	-	132649465	132805473
PT1_Y11.4	chr9	132776352	5'	-	132776047	305	intron	NM_015033	FNBP1	-	132649465	132805473
PT1_Y11.4	chr9	132777706	5'	+	132777941	235	intron	NM_015033	FNBP1	-	132649465	132805473
PT1_Y11.4	chr9	133706183	3'	-	133706051	132	intron	NM_007313	ABL1	+	133589267	133763062
PT1_Y11.4	chr9	133706178	5'	+	133706306	128	intron	NM_007313	ABL1	+	133589267	133763062
PT4_Y12.2	chr9	134093569	3'	-	134093341	228	intron	NM_005085	NUP214	+	134000980	134109091
PT1_Y11.4	chr9	134337508	5'	-	134337481	27	intron	NM_013318	PRRC2B	+	134305476	134375575
PT1_Y11.4	chr9	134935914	3'	+	134936116	202	intron	NM_004269	MED27	-	134735498	134955253
PT1_Y11.4	chr9	134935914	3'	+	134936026	112	intron	NM_004269	MED27	-	134735498	134955253
PT5_Y14.5	chr9	135553991	3'	+	135554282	291	exon	NM_012204	GTF3C4	+	135545727	135565470
PT5_Y14.5	chr9	139350705	3'	+	139350972	267	intron	NM_014866	SEC16A	-	139334547	139377507
PT1_Y11.4	chr9	139709745	5'	-	139709606	139	intron	NM_001173989	C9orf86	+	139702373	139735639
PT1_Y11.4	chr9	139709745	5'	-	139709699	46	intron	NM_001173989	C9orf86	+	139702373	139735639
PT4_Y12.2	chr9	139836363	3'	+	139836513	150	intron	NM_018998	FBXW5	-	139834886	139839173
PT3_Y7.2	chr9	140155591	5'	+	140155798	207	intron	NM_015456	COBRA1	+	140149758	140168000
PT1_Y11.4	chrX	13041037	3'	-	13040611	426	12698	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041037	3'	-	13040709	328	12698	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041037	3'	-	13040720	317	12698	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041037	3'	-	13040773	264	12698	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041037	3'	-	13040789	248	12698	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041037	3'	-	13040799	238	12698	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041037	3'	-	13040871	166	12698	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041037	3'	-	13040881	156	12698	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041037	3'	-	13040885	152	12698	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041037	3'	-	13040898	139	12698	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041037	3'	-	13040913	124	12698	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041037	3'	-	13040924	113	12698	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041037	3'	-	13040928	109	12698	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041037	3'	-	13040942	95	12698	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041037	3'	-	13040948	89	12698	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041037	3'	-	13040958	79	12698	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041037	3'	-	13040964	73	12698	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041037	3'	-	13040978	59	12698	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041037	3'	-	13040985	52	12698	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041037	3'	-	13040999	38	12698	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041037	3'	-	13041005	32	12698	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041037	3'	-	13041015	22	12698	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041032	5'	+	13041459	427	12703	NM_174901	FAM9C	-	13053735	13062917

PT1_Y11.4	chrX	13041032	5'	+	13041379	347	12703	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041032	5'	+	13041329	297	12703	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041032	5'	+	13041223	191	12703	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041032	5'	+	13041196	164	12703	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041032	5'	+	13041173	141	12703	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041032	5'	+	13041164	132	12703	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041032	5'	+	13041157	125	12703	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041032	5'	+	13041146	114	12703	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041032	5'	+	13041140	108	12703	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041032	5'	+	13041136	104	12703	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041032	5'	+	13041113	81	12703	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041032	5'	+	13041109	77	12703	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041032	5'	+	13041104	72	12703	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041032	5'	+	13041092	60	12703	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041032	5'	+	13041086	54	12703	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041032	5'	+	13041074	42	12703	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041032	5'	+	13041067	35	12703	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041037	3'	-	13040508	529	12698	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041037	3'	-	13040691	346	12698	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041037	3'	-	13040726	311	12698	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041037	3'	-	13040806	231	12698	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041037	3'	-	13040840	197	12698	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041037	3'	-	13040973	64	12698	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041037	3'	-	13040980	57	12698	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041032	5'	+	13041352	320	12703	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041032	5'	+	13041284	252	12703	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041032	5'	+	13041238	206	12703	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041032	5'	+	13041142	110	12703	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041032	5'	+	13041109	77	12703	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041032	5'	+	13041100	68	12703	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041032	5'	+	13041092	60	12703	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	13041032	5'	+	13041084	52	12703	NM_174901	FAM9C	-	13053735	13062917
PT1_Y11.4	chrX	15747958	3'	+	15748054	96	8453	NM_007220	CA5B	+	15756411	15805748
PT1_Y11.4	chrX	15858834	3'	+	15858940	106	intron	NM_003916	AP1S2	-	15843928	15873100
PT5_Y14.5	chrX	19682765	3'	+	19683106	341	intron	NM_001184960	SH3KBP1	-	19552082	19817917
PT1_Y0.2	chrX	20206997	3'	+	20207036	39	intron	NM_004586	RPS6KA3	-	20168028	20284750
PT4_Y12.2	chrX	24097640	3'	+	24097681	41	713	NM_001415	EIF2S3	+	24073064	24096927
PT1_Y0.2	chrX	30868529	5'	-	30868386	143	intron	NM_152787	TAB3	-	30845558	30907511
PT1_Y11.4	chrX	39836132	3'	+	39836240	108	74366	NM_001123385	BCOR	-	39910498	40036582
PT1_Y11.4	chrX	39836137	5'	-	39836068	69	74361	NM_001123385	BCOR	-	39910498	40036582
PT1_Y11.4	chrX	41663816	3'	+	41663861	45	intron	NM_001126054	CASK	-	41374188	41782287
PT1_Y4.8	chrX	44881227	5'	+	44881290	63	intron	NM_021140	KDM6A	+	44732422	44971845
PT4_Y12.2	chrX	48842188	3'	-	48841792	396	intron	NM_020137	GRIPAP1	-	48830133	48858675
PT4_Y12.2	chrX	48842188	3'	-	48842011	177	intron	NM_020137	GRIPAP1	-	48830133	48858675
PT4_Y12.2	chrX	48842188	3'	-	48842021	167	intron	NM_020137	GRIPAP1	-	48830133	48858675
PT1_Y11.4	chrX	53721622	5'	-	53721320	302	7949	NM_031407	HUWE1	-	53559062	53713673
PT5_Y14.5	chrX	57089384	3'	-	57089234	150	56730	NM_001006683	SPIN2B	-	57146114	57147979
PT4_Y12.2	chrX	73195236	3'	+	73195455	219	intron	NR_024582	JPX	+	73164158	73290217
PT1_Y11.4	chrX	74679953	5'	-	74679864	89	intron	NM_001146256	ZDHC15	-	74588261	74743337
PT1_Y11.4	chrX	76645307	3'	-	76645285	22	64339	NM_003868	FGF16	+	76709646	76712013
PT3_Y7.2	chrX	76923119	3'	-	76922885	234	intron	NM_138270	ATRX	-	76760355	77041719
PT1_Y11.4	chrX	78350639	3'	+	78350659	20	75829	NM_032553	GPR174	+	78426468	78427726
PT1_Y11.4	chrX	78396521	3'	-	78396351	170	29947	NM_032553	GPR174	+	78426468	78427726
PT1_Y11.4	chrX	117558931	3'	+	117558982	51	intron	NM_019045	WDR44	+	117480035	117583923
PT1_Y11.4	chrX	123105625	3'	+	123105908	283	intron	NM_001042749	STAG2	+	123094474	123236505
PT1_Y11.4	chrX	123182588	5'	+	123182793	205	intron	NM_001042749	STAG2	+	123094474	123236505
PT1_Y0.2	chrX	123471546	5'	+	123471769	223	8585	NM_001114937	SH2D1A	+	123480131	123507010
PT1_Y11.4	chrX	129374278	3'	-	129374164	114	intron	NM_017666	ZNF280C	-	129336672	129402922
PT1_Y0.2	chrX	129500712	5'	+	129501028	316	intron	NM_003951	SLC25A14	+	129474046	129507335
PT1_Y0.2	chrX	129500712	5'	+	129500909	197	intron	NM_003951	SLC25A14	+	129474046	129507335
PT1_Y0.2	chrX	129500712	5'	+	129500879	167	intron	NM_003951	SLC25A14	+	129474046	129507335
PT1_Y0.2	chrX	129500712	5'	+	129500829	117	intron	NM_003951	SLC25A14	+	129474046	129507335
PT1_Y0.2	chrX	129500712	5'	+	129500761	49	intron	NM_003951	SLC25A14	+	129474046	129507335
PT1_Y0.2	chrX	129500712	5'	+	129500753	41	intron	NM_003951	SLC25A14	+	129474046	129507335
PT1_Y11.4	chrX	129901094	3'	-	129900692	402	intron	NM_006375	ENOX2	-	129757356	130037208

[illegible]



PT1_Y11.4	Unk	140148	3'	-
PT1_Y11.4	Unk	140148	3'	-
PT1_Y11.4	Unk	140148	3'	-
PT1_Y11.4	Unk	140148	3'	-
PT1_Y11.4	Unk	140148	3'	-
PT1_Y11.4	Unk	140148	3'	-
PT1_Y11.4	Unk	140148	3'	-
PT1_Y11.4	Unk	140143	5'	+
PT1_Y11.4	Unk	140143	5'	+
PT1_Y11.4	Unk	140143	5'	+

(a) Patient (PT) and year on therapy (Y) of sample.

(b) Note that 5' and 3' LTRs at the same site differ by 5 bases.

(c) From hg19.

(d) If not in gene, shows distance to nearest gene.

(e) Unknown. These sequences could not be mapped because they were present multiple times in the genome

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