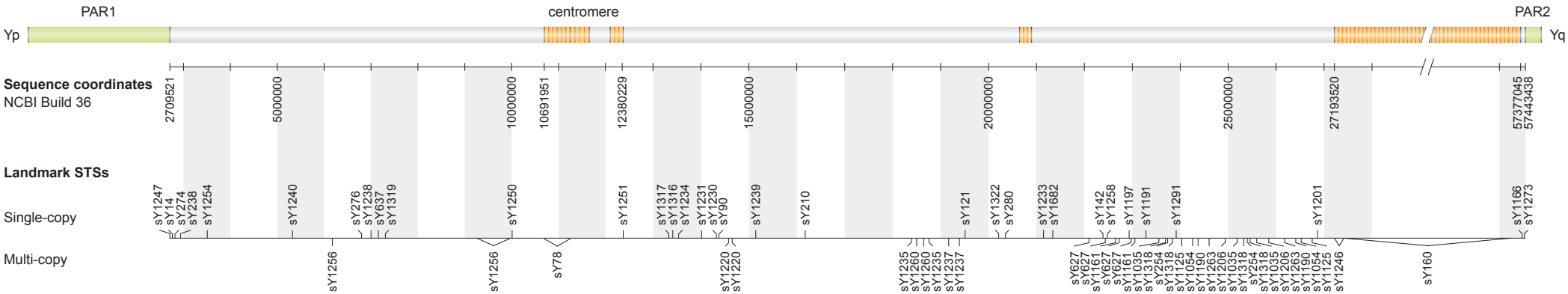
Example: Retrieve STSs Between Two Loci

MSY Breakpoint Mapper
http://breakpointmapper.wi.mit.edu/

1. By testing your sample with 51 landmark STSs,[1] you have identified the following breakpoint: between sY1239 and sY210.

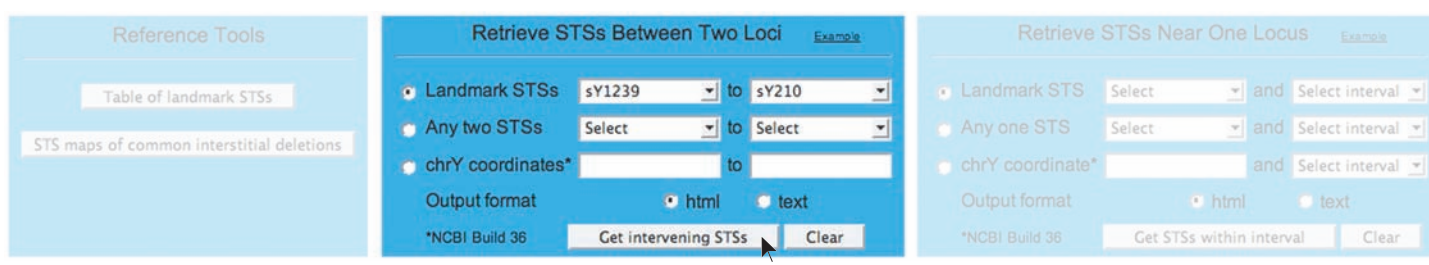


Observed STS results

Landmark STSs (asterisks denote multi-copy STSs)

	sY1247	sY14	sY274	sY238	sY1254	sY1240	sY1256*	sY276	sY1238	sY637	sY1319	sY1250	sY78*	sY1251	sY1317	sY1316	sY1234	sY1231	sY1230	sY90	sY1220*	sY1239	sY210	sY1235*	sY1260*	sY1237*	sY121	sY1322	sY280	sY1233	sY1682	sY627*	sY142	sY1258	sY1161*	sY1197	sY1191	sY1035*	sY1318*	sY254*	sY1291	sY1125*	sY1054*	sY1190*	sY1263*	sY1206*	sY1201	sY1246*	sY160*	sY1166	sY1273
Your sample	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+ -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

2. This breakpoint does not correspond to a previously reported common deletion.[2] To further narrow the breakpoint in your sample, you wish to assay additional STSs between sY1239 and sY210. To generate a catalogue of STSs between sY1239 and sY210, select [sY1239] and [sY210] from pull-down menus, and click on the [Get intervening STSs] button.



continued page 2

Notes

[1] See Table of landmark STSs under Reference Tools. Landmark STSs consist of sY1247 and sY1273, located at the boundaries between MSY and pseudoautosomal (PAR) sequences on Yp and Yq, respectively, and a previously published panel of 49 STS (see Supplementary Methods Table SM-2 in Repping et al., 2006).

[2] See STS maps of common interstitial deletions under Reference Tools.

3. STSs in the interval between sY1239 and sY210 are displayed as a table and in a custom Y chromosome browser. For each STS, the table indicates: multi-copy with an asterisk, start and end sequence coordinates, PCR product length, primer sequences, amplification conditions, GenBank accession number, and in the case of a multi-copy STS, sequence coordinates of co-amplified loci. The custom Y chromosome browser displays the ~1-Mb region encompassing the catalogued STSs. The position of each STS and of each protein-coding gene within the interval is indicated.

The following STSs are between sY1239 (chrY:15143871-15144336) and sY210 (chrY:16175655-16175919):

STS Identifier	Multi-copy	STS Start	STS End	STS Length	Primer 1	Primer 2	PCR Conditions	GenBank	Co-amplified Loci
sY1239		15143871	15144336	466	CCTAGCTCTCTTTTTCTTGCAG	CAAATATCGCCAGTGAGGCT	Standard PCR	BV210876	
NLGN4Y-1		15143872	15144337	466	CCTAGCTCTCTTTTTCTTGCAG	CAAATATCGCCAGTGAGGCT	Touchdown PCR	BV679040	
sY886		15288499	15288743	245	TGATACAAGGAAGAATCCACCTG	TGTGTGTGTGTATCCTCCCTG	Standard PCR	G66009	
sY3181		15298857	15299167	311	TGGAAAGGTCCCAGTCATTC	AAAATTAGCTGGGCATGGTG	Touchdown PCR	BV704046	
sY3203		15299660	15299935	276	GCAACTGTACATTGGCAGCA	TAGTTTGGAAAGGGTCGTGG	Standard PCR	BV704068	
sY3204		15300468	15300850	383	TGTTGCATTTTTGCCATGTT	GTGAAGATGACTGTTGCCCA	Standard PCR	BV704069	
sY3205		15301315	15301536	222	CATATGGGGTTGCCATTTTC	CCCCTCTCTTTGGAGAGCTT	Standard PCR	BV704070	
sY3206		15302112	15302395	284	TAAATGGGGAGTTTGGGACA	AAAGGGAATTGGGTTGGTTC	Touchdown PCR	BV704071	
sY3192		15302595	15303087	493	TGCTGAGGAAAGGAGGAAGA	TACTGAGGTCAATCCCTGCC	Touchdown PCR	BV704057	
...									
STSP-4		16170740	16171530	791	TGAACTCTCAGACGTTGGGG	CAACCATCCATTCATCCATT	Touchdown PCR	BV679103	
STSP-5		16172594	16173593	1000	TTTGGGATTTTGATCCGGT	GTAAAGGCCAGCGGGTTATC	Touchdown PCR	BV679104	
sY2481		16172866	16172964	99	GGGTTAAGGAGGTCATCCCA	TCAGAGAAATGGCACATTGG	Standard PCR	G66437	
sY210		16175655	16175919	265	ATCACTTGGCAGCTTTTCC	GCACTGCAACTTTTATGCCT	Standard PCR	G38361	

Showing 1.032 Mb chrY:15143871-16175919

Instructions: Search using an STS identifer, sequence coordinates, or gene symbol. Gene symbols may require a final asterisk wildcard to indicate a gene copy. You can also specify a gene (Gene:BPY2*) or an STS (STS:BPY2*).
Examples: Y, Y:20000000..20100000, sY14, sY34, sY1229, AMELY, AMELY-4, DAZ*, sY*, Gene:BPY2*, STS:BPY2*, Gene:*.