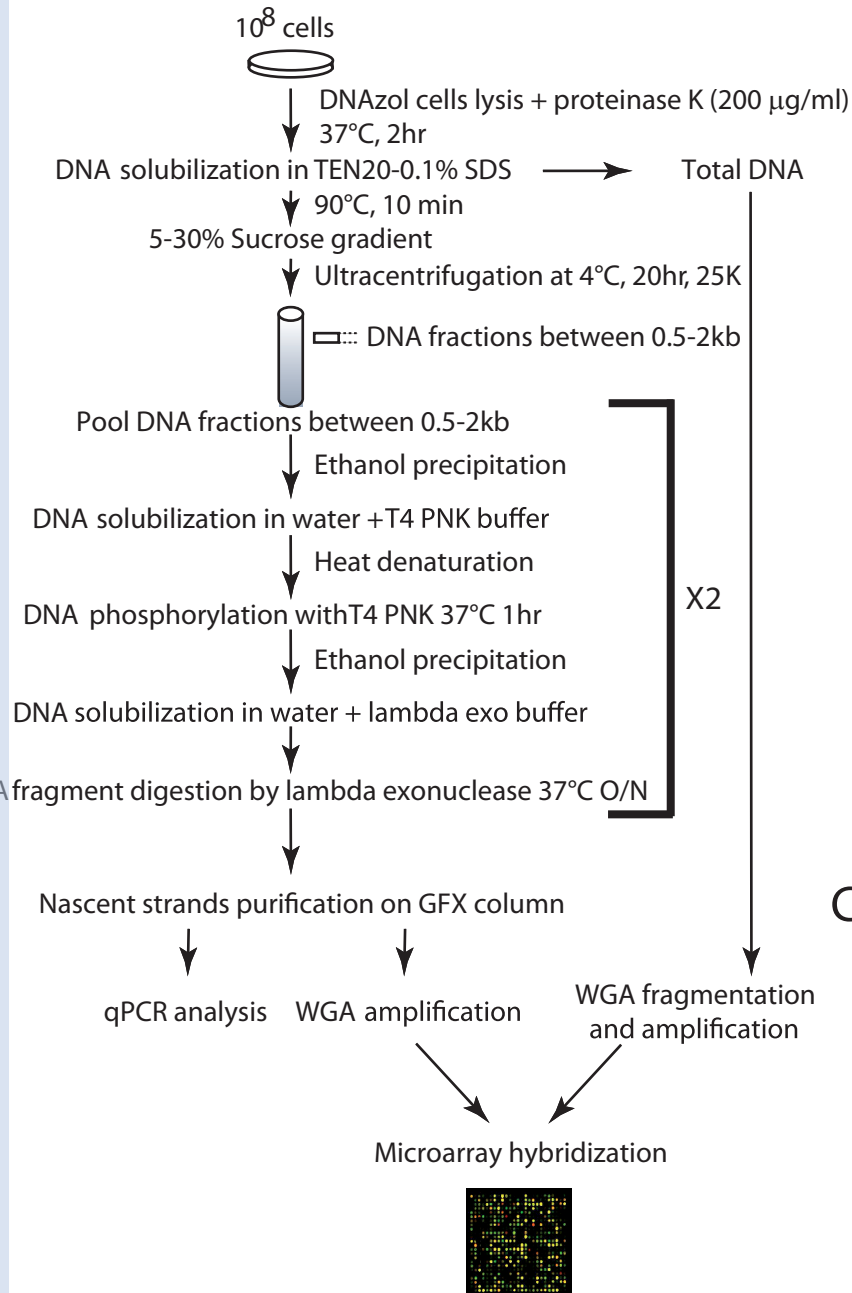
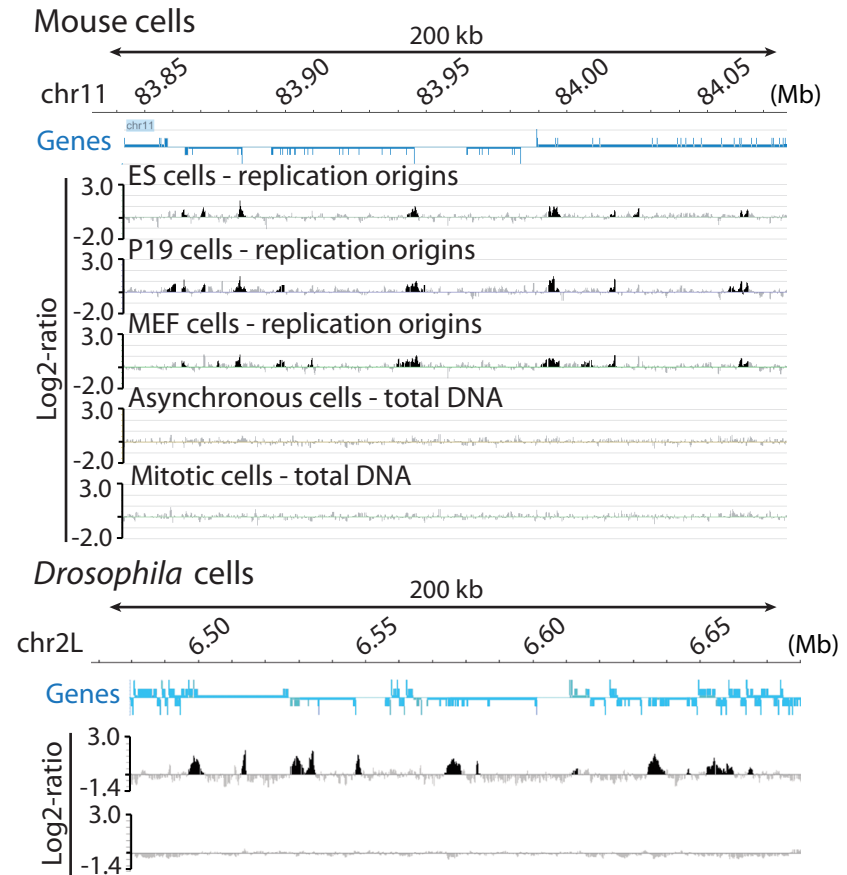


A



B



C

	origin number (per 60MB)	origin density (/ 100MB)	origins/genome
ES	2412	3993	→ 106 200
P19	2748	4550	→ 121 000
MEF	2231	3794	→ 100 900
<hr/>			
	origin number (per 118.3MB)	origin density (/ 100MB)	
Kc	6184	5227	→ 9430

D

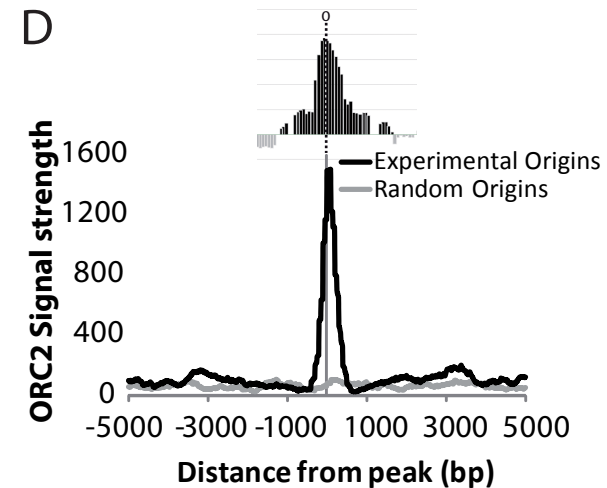
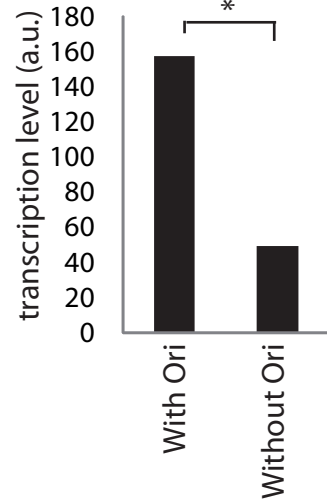


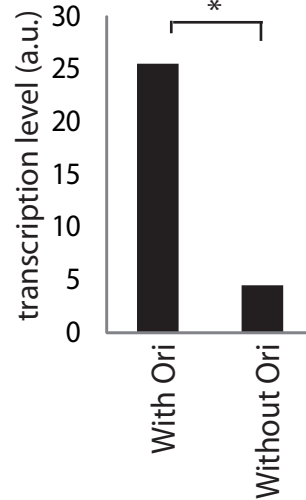
Figure 2

A

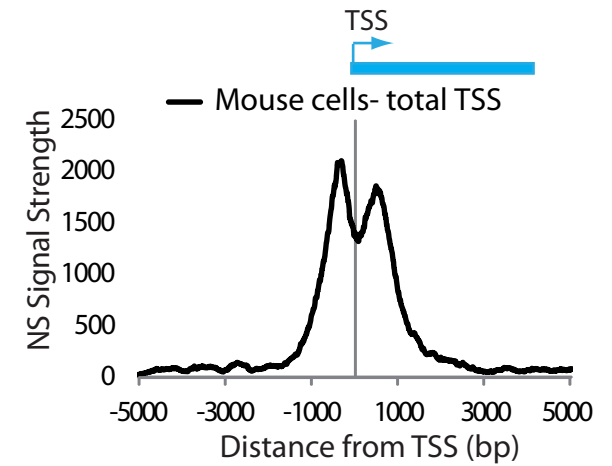
Mouse cells



Drosophila cells

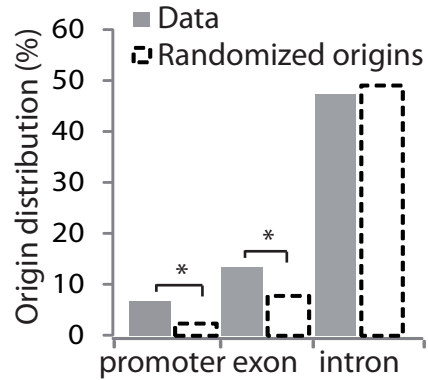


D

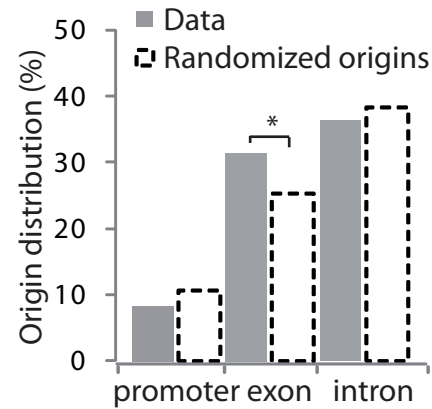


B

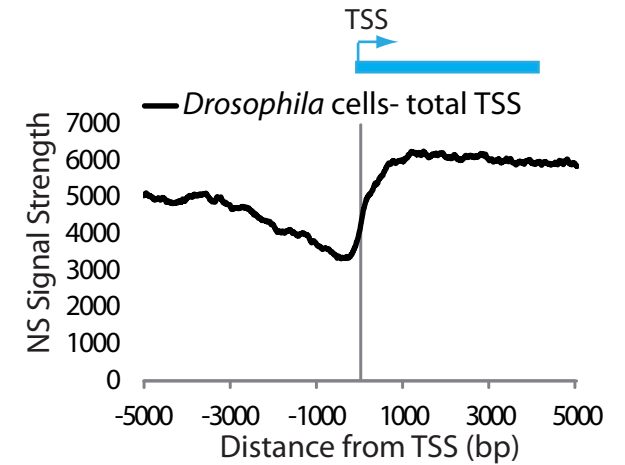
Mouse cells



Drosophila cells

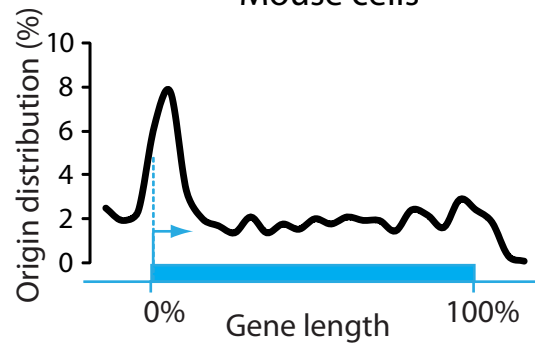


E

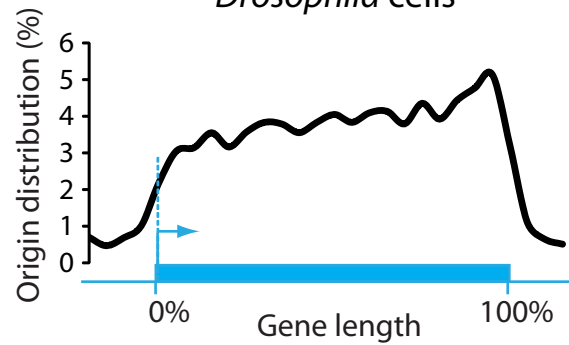


C

Mouse cells



Drosophila cells



F

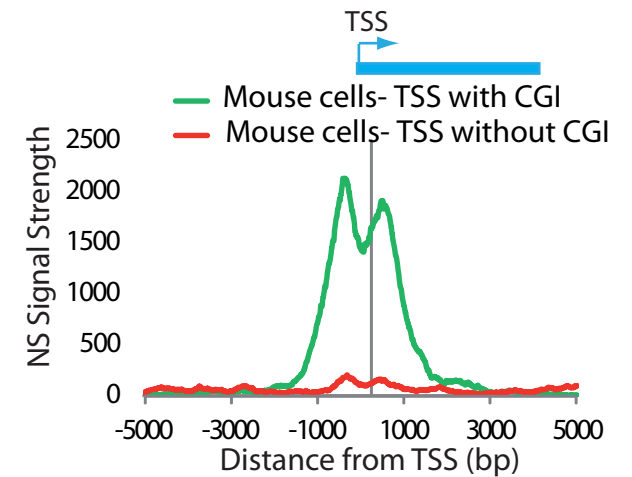


Figure 3

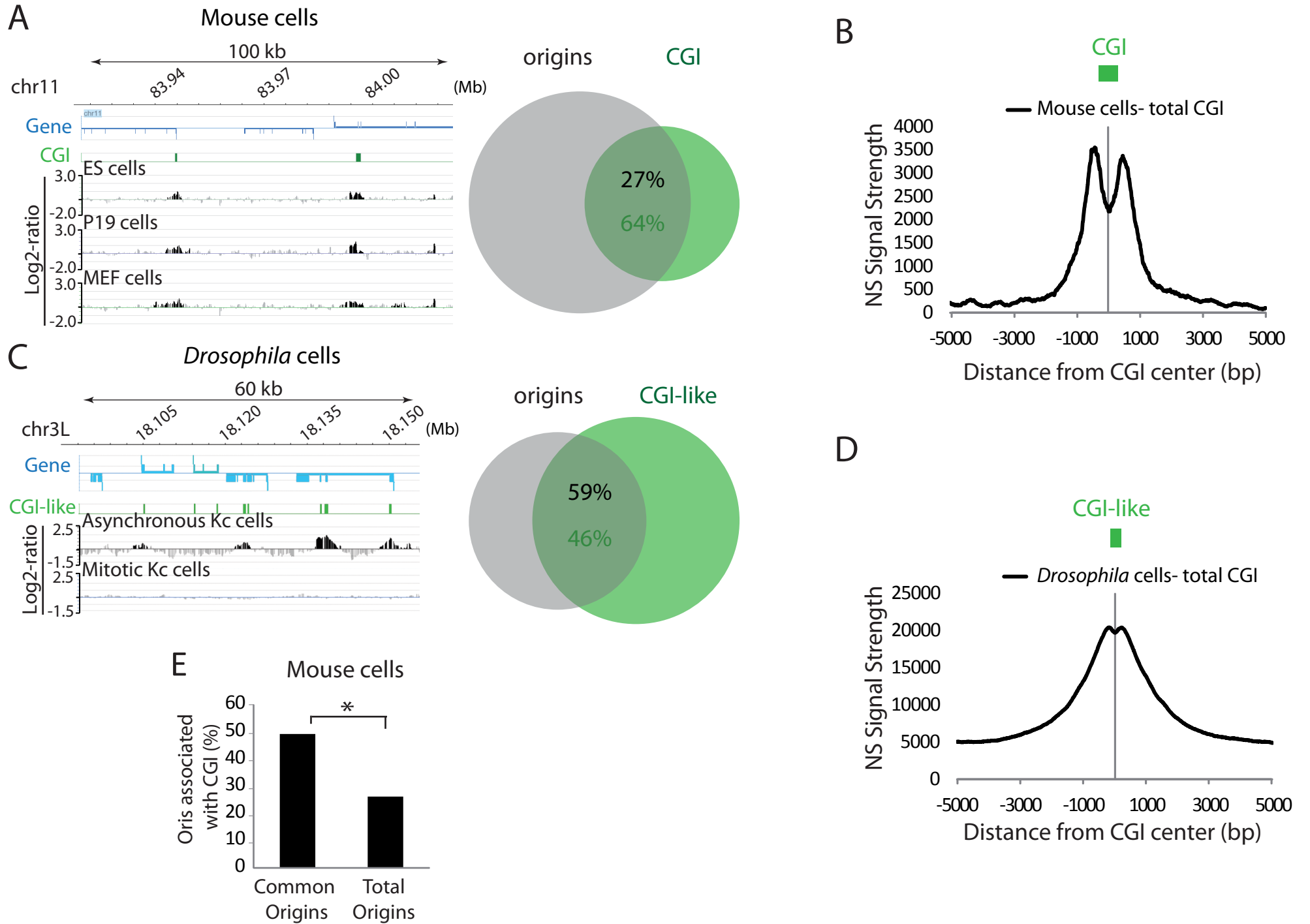
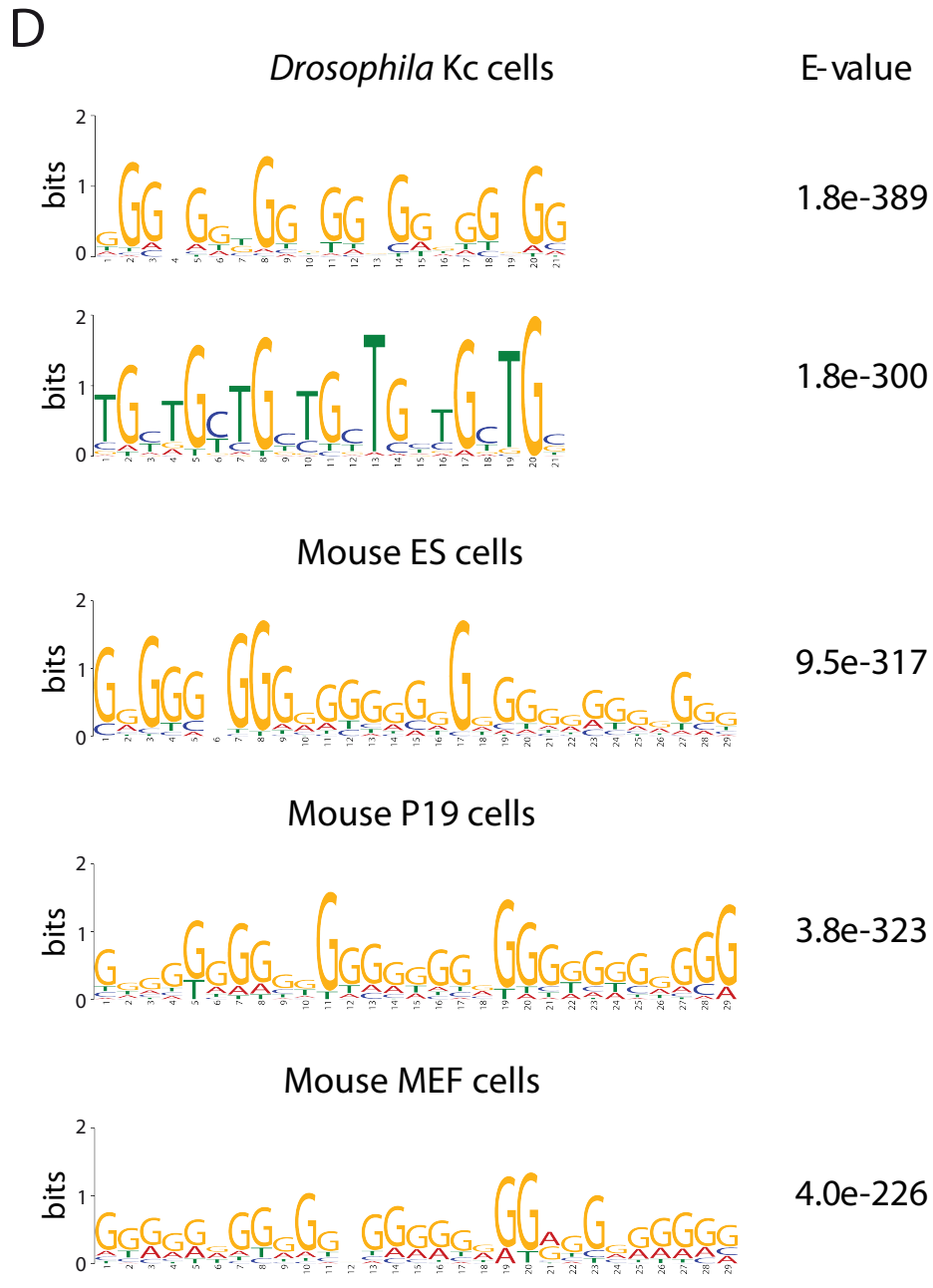
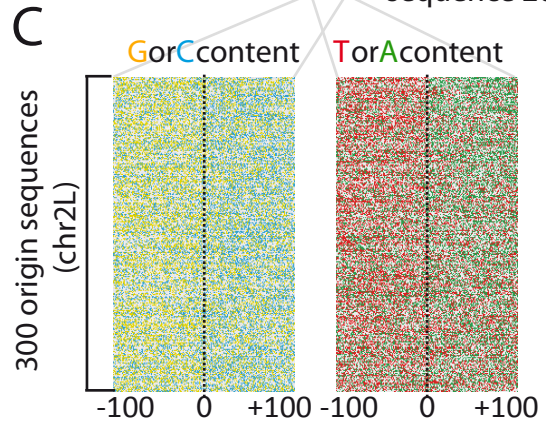
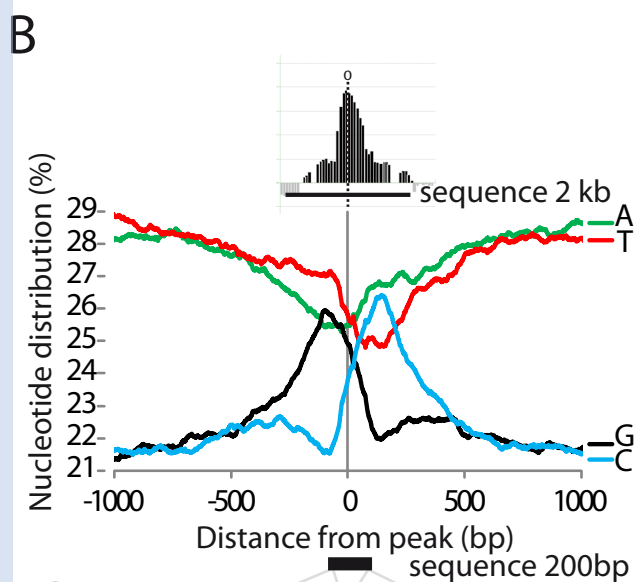
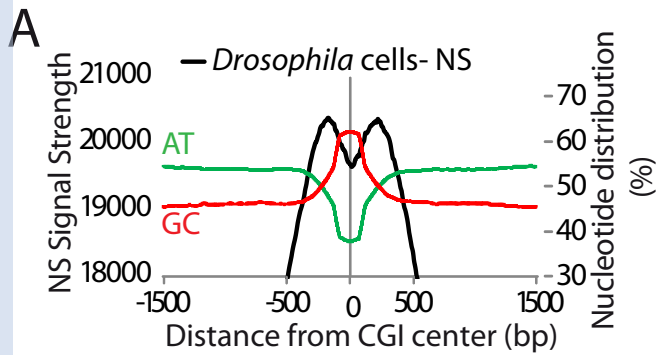


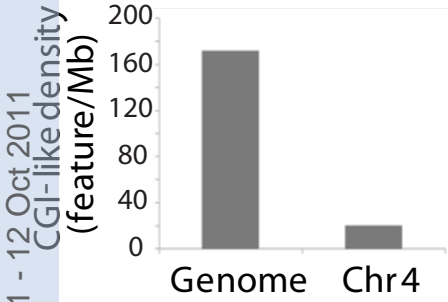
Figure 4



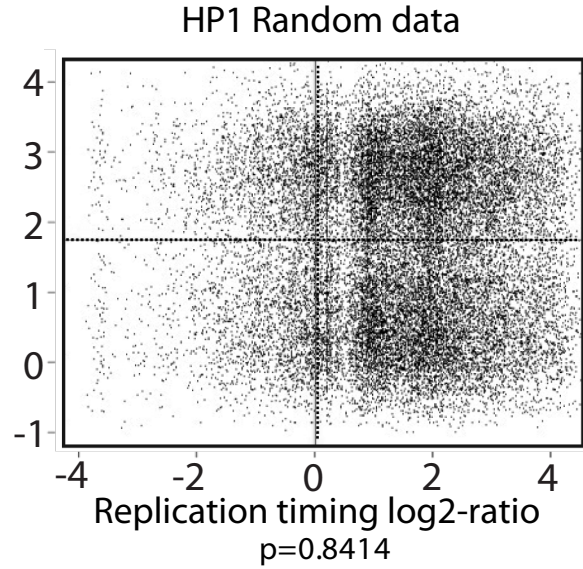
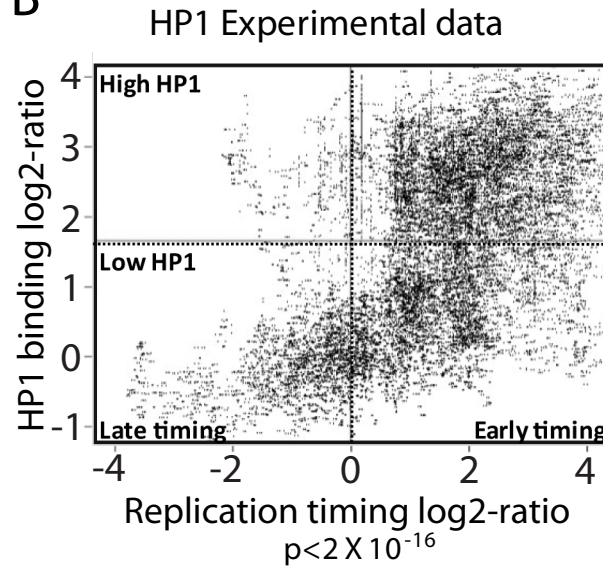
lirmm-00631491, version 1 - 12 Oct 2011

Figure 5

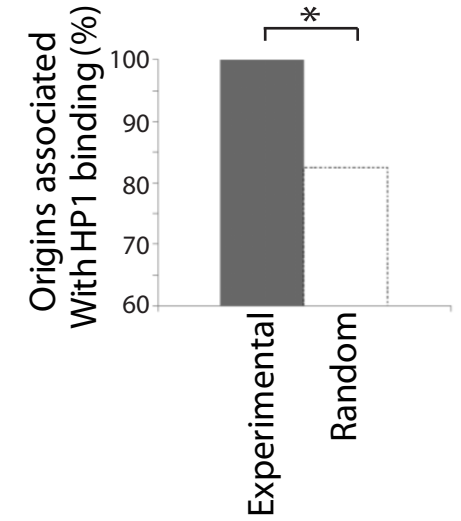
A



B



C



chr 4 0.15 0.20 0.25 0.30 0.35 0.40 0.45 (Mb)

Genes



Nascent strands



HP1



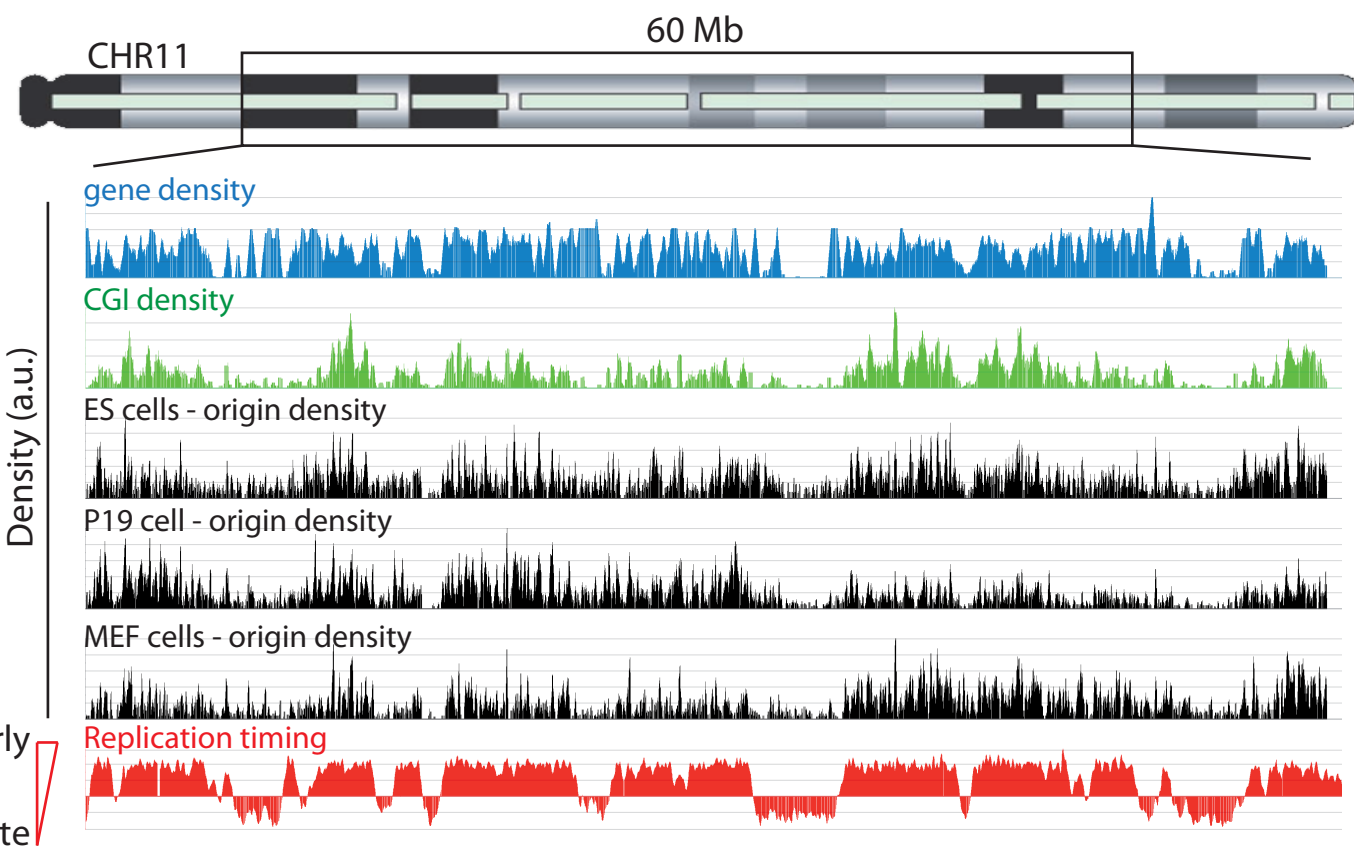
Replication timing



Early
Late

Figure 6

A



B

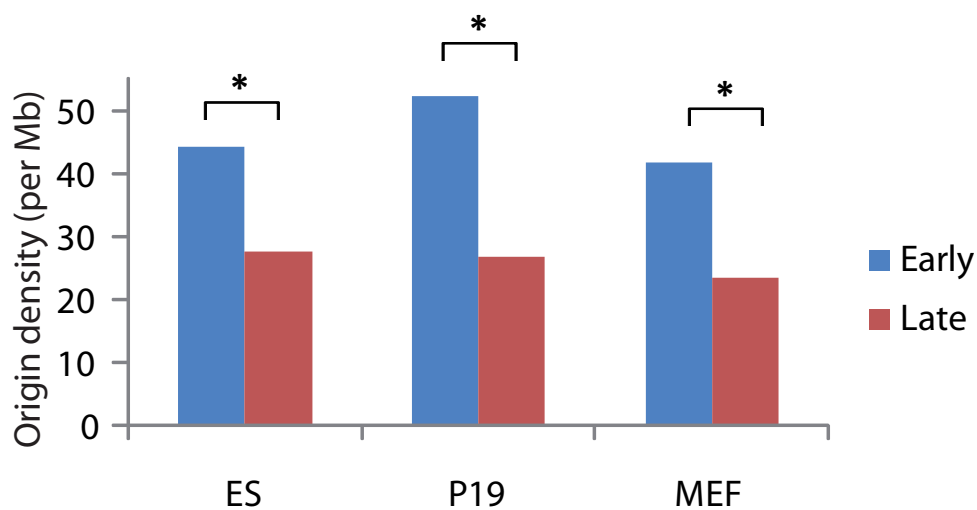
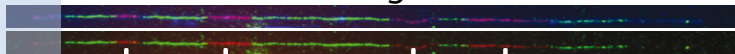


Figure 7

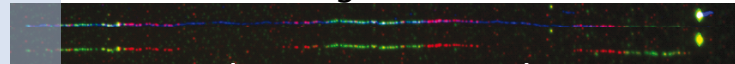
A

DNA combing in Kc cells



ori ori ori ori
mean Kc cells: 73 kb (236 fibers)

DNA combing in MEF or ES cells



ori ori
mean MEF cells: 136 kb (199 fibers)
mean ES cells: 139 kb (242 fibers)

B MEF cells

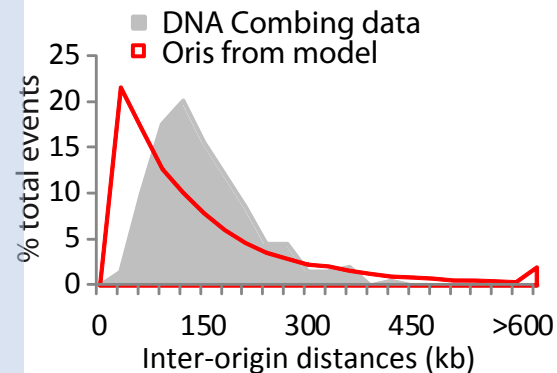
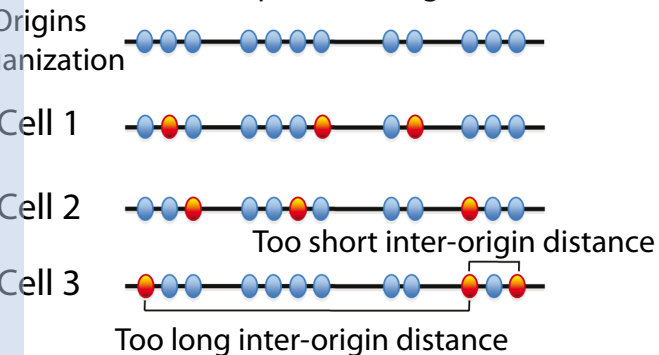
Oris repertoire	Experimental procedure	Firing efficiency (%)	Mean inter-origin distance (kb)	Different from DNA combing ? (p-value)
All potential Oris	Microarrays	100	27.07	YES ($p < 2 \cdot 10^{-16}$)
Single molecule Oris	DNA combing	19.8	136.55	-
Random fired Oris	Simulation	19.8	136.15	YES ($p < 3.69 \cdot 10^{-14}$)
Increasing efficiency Oris	Simulation	[0.53-50.4]	135.35	YES ($p = 0.02$)
Flexible replicon Oris	Simulation	19.8	136.72	NO ($p = 0.53$)

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C

Random Ori firing

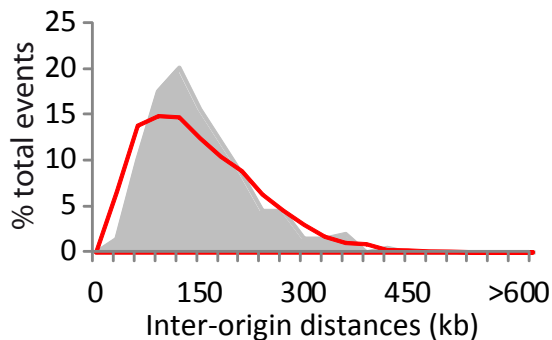
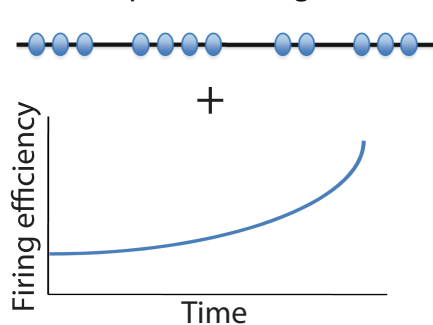
Independent Origins



D

Increasing Ori efficiency

Independent Origins



E

Flexible replicon

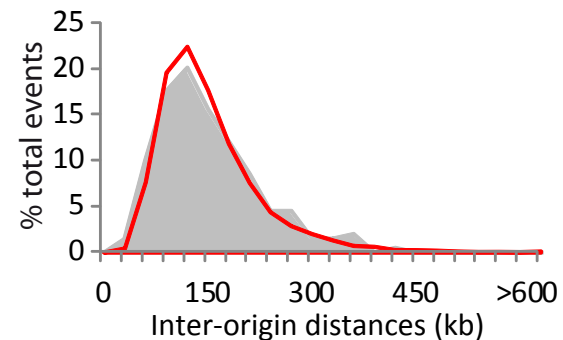
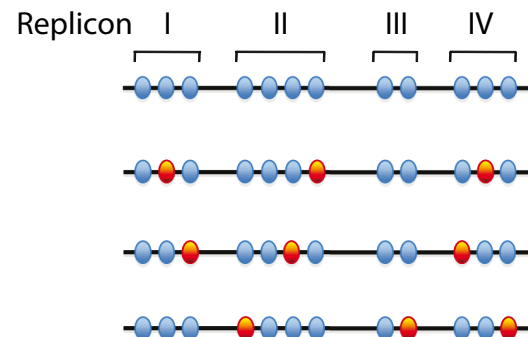
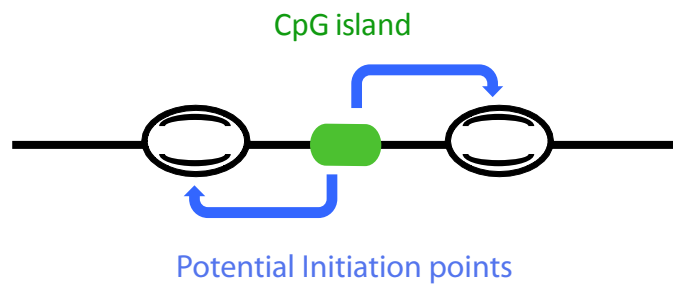
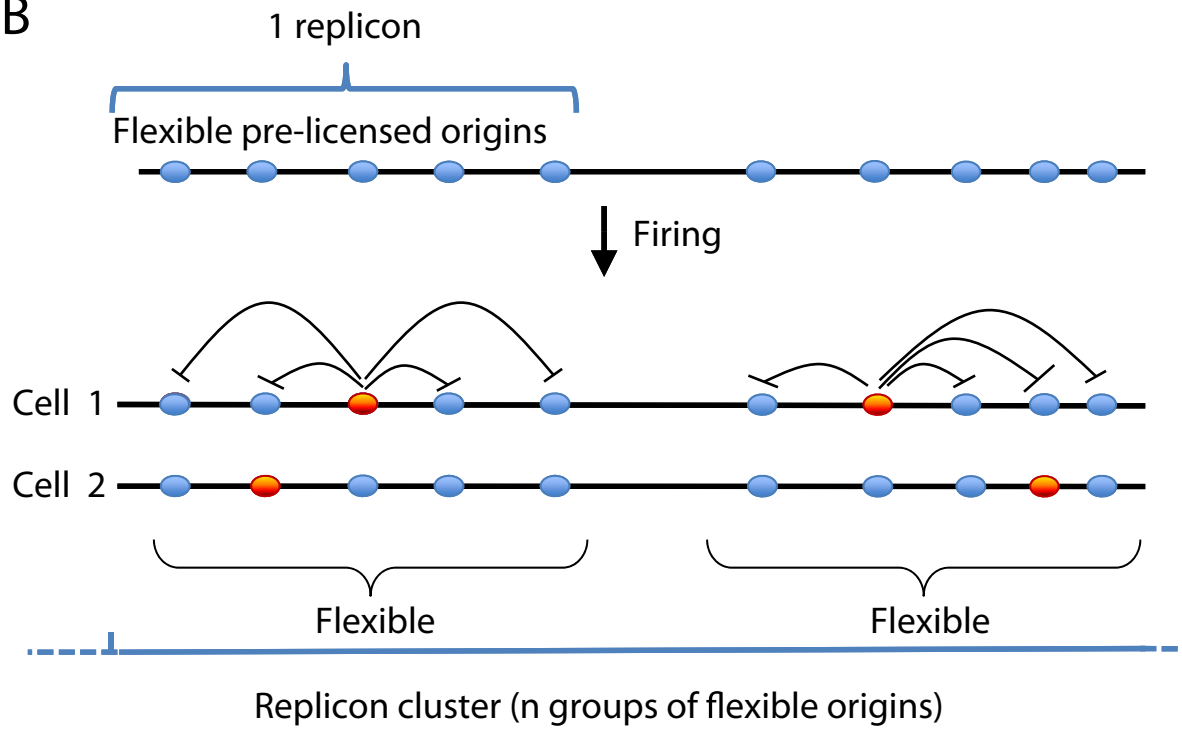


Figure 8

A



B



C

