

Dataset	Resolution	Sample	HiCCUPS	UnionLoops
[35]	5 kb	0 hour	4088	7791
		6 hour	3030	5979
		72 hour	5818	9415
		MEGA	5319	12271
[36]	5 kb	hESC	1978	3824
		DE	2713	5118
		PGT	2639	4686
		PP	4935	7233
		SC- β org	6077	8217
		MEGA	12866	13351
[36]	10 kb	hESC	5000	7565
		DE	7266	10393
		PGT	6732	9633
		PP	9363	11984
		SC- β org	9996	12167
		MEGA	16351	19104

Table S1. Number of chromatin loops per sample detected by HiCCUPS and UnionLoops in each dataset at different resolutions.

Dataset	UnionLoops -defined	Total	Lost (DESeq2)	Gained (DESeq2)	Non-significant (DESeq2)
[35] (0 h to 72 h; 5 kb; 4 reps)	Lost	1744	28	0	1716
	Gained	3368	0	11	3357
[36] (DE to PP; 10 kb; 2 reps)	Lost	3500	0	0	3500
	Gained	5091	0	0	5091

Table S2. Summary of differential chromatin loops detected by DESeq2 using UnionLoops-defined lost and gained loop sets.