

Sample:	Trimmed sequences analyzed (M):	mapping:	duplication:	Conversion rate (Lambda mC/TotalC):	FRiP (5M reads):
mATAC-seq HCT116 Replicate 1	32.6	45.40%	63.73%	99.76%	0.45
mATAC-seq HCT116 Replicate 2	25.1	46.60%	38.42%	99.54%	0.49
mATAC-seq DKO Replicate 1	24.6	44.70%	25.12%	98.93%	0.31
mATAC-seq DKO Replicate 2	23.2	46.30%	26.22%	99.35%	0.27
Omni-ATAC-seq HCT116 Replicate 1	15	89.30%	17.66%		0.26
Omni-ATAC-seq HCT116 Replicate 2	14.3	89.20%	18.61%		0.28
Omni-ATAC-seq DKO Replicate 1	16.5	88.50%	18.92%		0.27
Omni-ATAC-seq DKO Replicate 2	22.7	88.20%	12.84%		0.15

Table S1: Samples sequenced in this study. Values show millions (M) trimmed sequences analyzed, mapping efficiency using Bismark, conversion rate of unmethylated Lambda-DNA spike-in after filtering, and Fraction of Reads in Peaks (FRiP) score in down-sampled libraries.

Genotyping oligonucleotides:

DNMT1-Gen-F1:	AAACTGGCAGGTGCTAACTG
DNMT1-Gen-R1:	AGATGTGATGGTGGTTTGCC
DNMT3B-Gen-F1:	TTGGTTTTGCTCAGAGCCAG
DNMT3B-Gen-R1:	ACGTGTGGGCAAGAGATTTTC
GAPDH-Gen-F1:	GAAGGTGAAGGTCGGAGTC
GAPDH-Gen-R1:	GAAGATGGTGTGTTGGATTTTC
GPO-3	GGGAGCAAACAGGATTAGATACCCCT
MGSO:	TGCACCATCTGTCACTCTGTAACTC
VM164A:	TGCCTCTAGATCGTATTCCC
VM-164B:	GCACTCTGTGGCATGAAGGT
RB164K2:	TGGCTCCTCCCTCTATTATCG

Table S2: Oligonucleotides used in Figure S4 to genotype and verify cell lines were ordered from Integrated DNA Technologies and purified by standard desalting.

Tn5 oligos:

Tn5MErev:	/5Phos/CTGTCTTTATACACATCT
Tn5ME-A:	TCGTCCGGCAGCGTCAGATGTGTATAAGAGACAG
Tn5ME-B:	GTCTCGTGGGCTCGGAGATGTGTATAAGAGACAG
Tn5ME-A_mC:	T/iMe-dC/GT/iMe-dC/GG/iMe-dC/AG/iMe-dC/GT/iMe-dC/AGATGTGTATAAGAGA/iMe-dC/AG
Tn5ME-B_mC:	GT/iMe-dC/T/iMe-dC/GTGGG/iMe-dC/T/iMe-dC/GGAGATGTGTATAAGAGA/iMe-dC/AG
i7 Primers:	CAAGCAGAAGACGGCATAACGAGAT[i7]GTCTCGTGGGCTCGG
i5 Primers:	AATGATACGGCGACCACCGAGATCTACAC[i5]TCGTCCGGCAGCGTC

Table S3: Oligonucleotides used to assemble Transposomes and PCR libraries were ordered from Integrated DNA Technologies and purified by standard desalting. '/iMe-dC/' represents an internal methylated dC. '/5Phos/' represents a 5' phosphate. '[i7]' represents Nextera i7 barcodes. '[i5]' represents Nextera i5 barcodes.