

Table S1. Primer sequences for quantitative real-time RT-PCR

Gene	Sequence(5'-3')
DNMT1	F: GGCTGAGATGAGGCAAAAAG
	R: ACCAACTCGGTACAGGATGC
miR-34a-5p	F: TGGCAGTGTCTTAGCTGGTTGT
	R: GCGAGCACAGAATTAATACGAC
CD133	F: ATGCTCTCAGCTCTCCCGC
	R: TTCTGTCTGAGGCTGGCTTG
CD44	F: GCAAACACAACCTCTGGTCC
	R: CCCACACCTTCTTCGACTGT
ALDH1	F: GCACGCCAGACTTACCTGTC
	R: CCTCCTCAGTTGCAGGATTAAG
Bmi1	F: CTGGTTGCCATTGACAGCG
	R: AAATCCCGGAAAGAGCAGCC
Sox2	F: GCCCTGCAGTACAACTCCAT
	R: CTGATCATGTCCCGTAGGT
Oct4	F: GTGAGAGGCAACCTGGAGAG
	R: GAATGGGACCGAGGAGTACA
FOXM1	F: ATACGTGGATTGAGGACCACT
	R: TCCAATGTCAAGTAGCGGTTG
GAPDH	F: ACACTCACTCTTCTACCTTTG
	R: CAAATTCATTGTCGTACCAG
U6	F: CTCGCTTCGGCAGCACA
	R: AACGCTTCACGAATTTGCGT

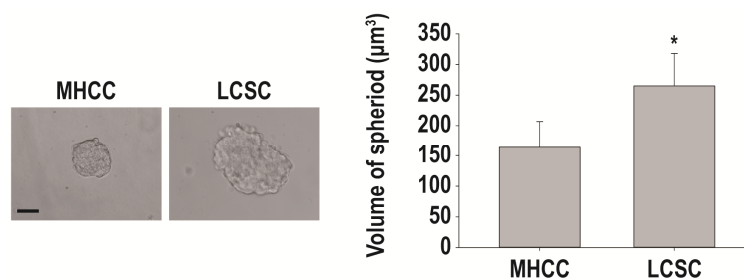
Table S2. Primer sequences for methylation specific PCR

Gene	Sequence(5'-3')
miR-34a-5p-M	F: ATGAGGATTAGGATTTTCGGAG
	R: AACGCATAAAAACGACGACAA
miR-34a-5p-U	F: GGGGATGAGGATTAGGATTTT
	R: ATAAAACTAAAACTCTACCTTCGCT

Table S3. Comparison of tumor formation ability of LCSCs and parental MHCC97H cells in Balb/c-nu mice (n = 6)

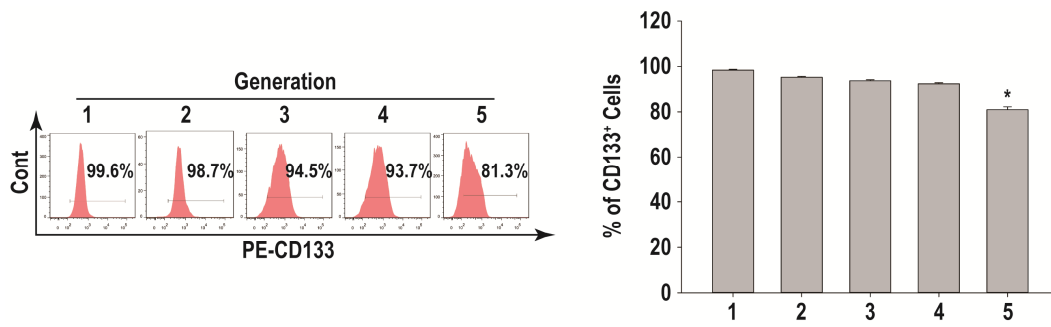
Cell Type	Cell (n)	Inoculated	Tumor Incidence (n/4)	Latency (d)	Tumor volume (mm <sup>3</sup> )	Tumor weight (g)
MHCC	10 <sup>5</sup>		6/6	23~48	659±76	0.54±0.15
HCSLC	10 <sup>5</sup>		6/6	6~12	1968±92*	1.75±0.25*

The control samples included the tumor volume and tumor weight of LCSCs xenografts. Comparisons were carried out for LCSCs derived from MHCC97H cells with control cells, \* $P < 0.05$ .



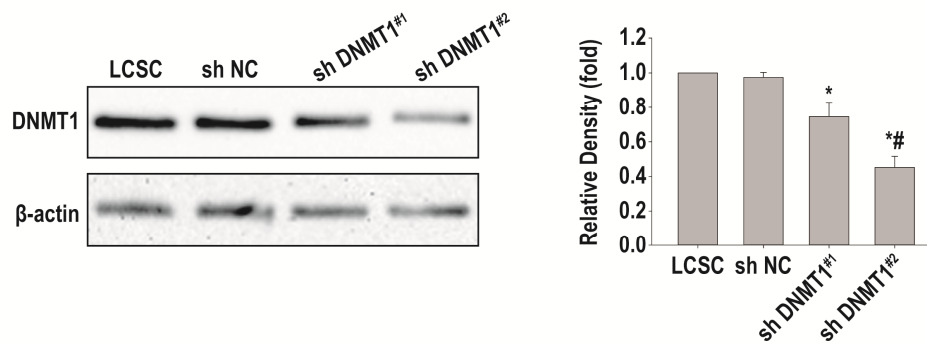
**Supplementary Figure S1** Comparing the volume of spherioids between MHCC97H cells and LCSCs.

\* $P < 0.05$  vs MHCC97H cells (n=3).



**Supplementary Figure S2** CD133<sup>+</sup> cell percentages of LCSC during serial passage in sphere culture.

\* $P < 0.05$  vs First Generation of LCSC (n=3).



**Supplementary Figure S3** Effects of different DNMT1 shRNA on DNMT1 protein expression of MHCC97H derived LCSCs

\* $P < 0.05$  vs LCSC or sh NC (n=3); #  $P < 0.05$  vs sh DNMT1#1 (n=3).