A microfluidic device with integrated sonication and immunoprecipitation for sensitive epigenetic assays

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Supporting Information: Table S1-S2 and Video S1-S4

Table S1. Primer sequences used in ChIP-qPCR.

GM12878 and H3K4me3		
C9orf3	F	CCTCCTCAGTTCTCCCAGACT
	R	AGCTGAGGTGGTAAGATGTGAC
UNKL	F	CAGCCACCCACCTAGGAA
	R	TCCTATGGCTCCCCAGGT
N1	F	TCATCTGCAAATGGGGACAA
	R	AGGACACCCCCTCTCAACAC
N2	F	ATGGTTGCCACTGGGGATCT
	R	TGCCAAAGCCTAGGGGAAGA

Table S2. Primer sequences used in MeDIP-qPCR.

gDNA of GM12878 and 5-mC		
SNRPN	F	CGCTCAACACCCCCTAAATA
	R	GGTGGAGGTGGGTACATCAG
MAGEA1	F	GTTCCCGCCAGGAAACATC
	R	GAACTCTACGCCGTCCCTCAG
GABRB3	F	CCTGCAACTTTACTGAATTTAGC
	R	GGAATCTCACTTTCACCACTGG
GAPDH	F	CGTAGCTCAGGCCTCAAGAC
	R	GCTGCGGGCTCAATTTATAG

Supplementary Videos

Video S1: Cavitation at the edge of a microfluidic chamber without crescent structures. Sine-wave AC with V_{peak} of 20 V and 61 kHz was applied. The video was captured and played at a frame rate of 8 fps.

Video S2: Cavitation in a microfluidic chamber containing multiple crescent shapes. V_{peak} was gradually increased from 10 to 25 V. Sine-wave at 61 kHz was applied. The video was captured at a frame rate of 8 fps and is played at 20 fps.

Video S3: Acoustic streaming around a crescent shape. Sine-wave of 61 kHz and V_{peak} of 10 V was applied. 10X objective was used. The video was captured and played at a frame rate of 8 fps.

Video S4: A close look of acoustic streaming around the tip of a crescent shape. Sine-wave of 61 kHz and V_{peak} of 10 V was applied. 20X objective was used. The video was captured and played at a frame rate of 8 fps.