

Supplement

Figure S1. High-magnification image of the 10 μm wide base and the picture of cross section.

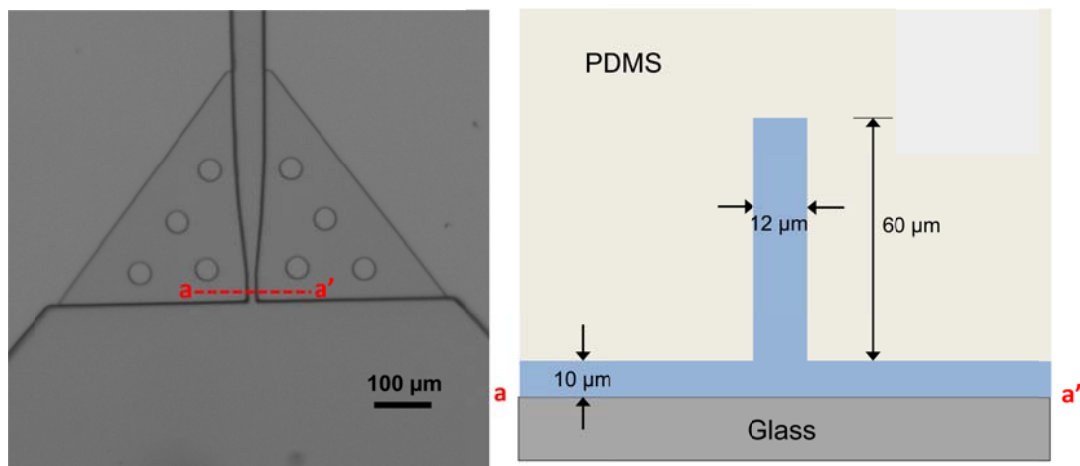


Figure S2. The same hermaphrodite in its chamber at different time points.

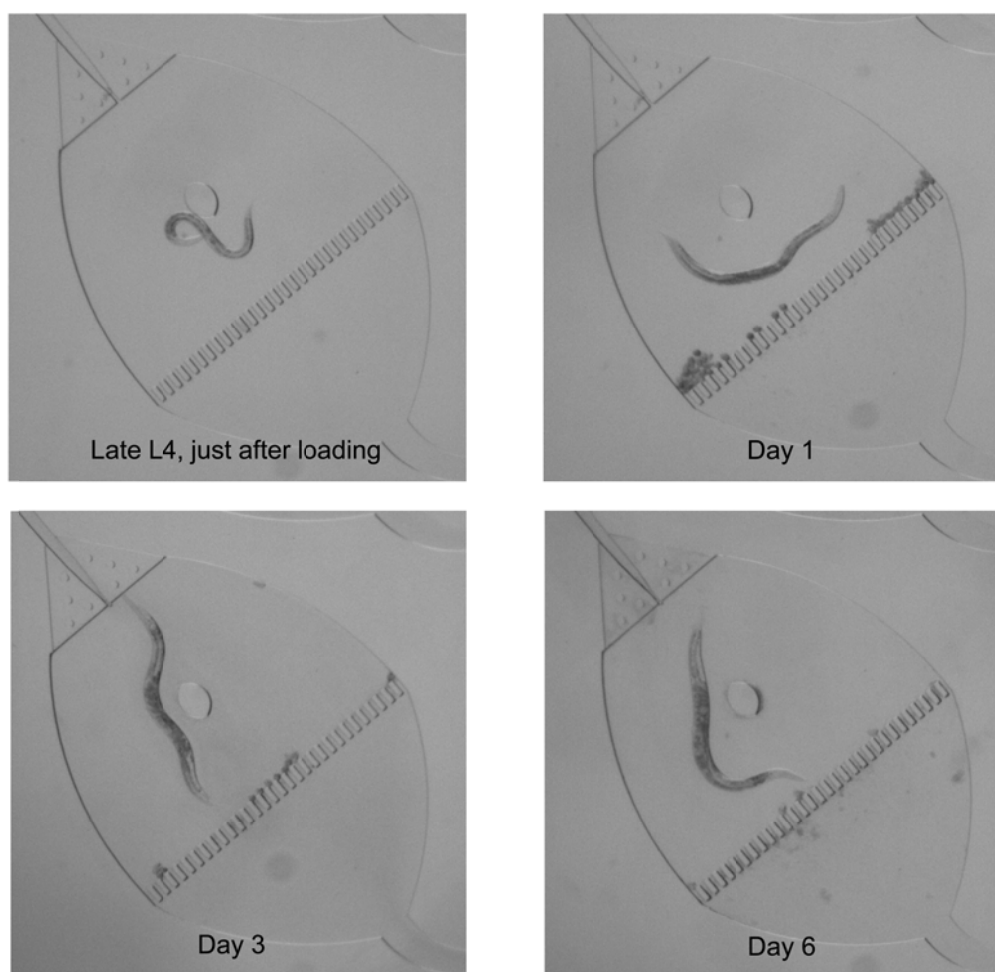


Figure S3. The three points (marked as red) were used to define the length and width of the 16 counting areas which have the same size.

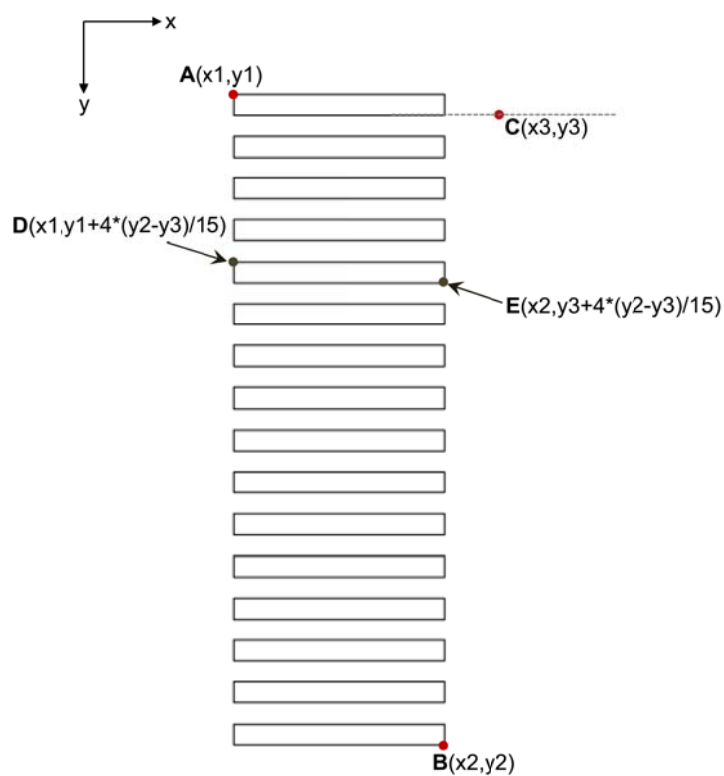


Figure S4. The original “standard deviation” signals from the **Video S1**. Peaks of different color mean worms passing through different channels. The number on top of each peak represents the channel number.

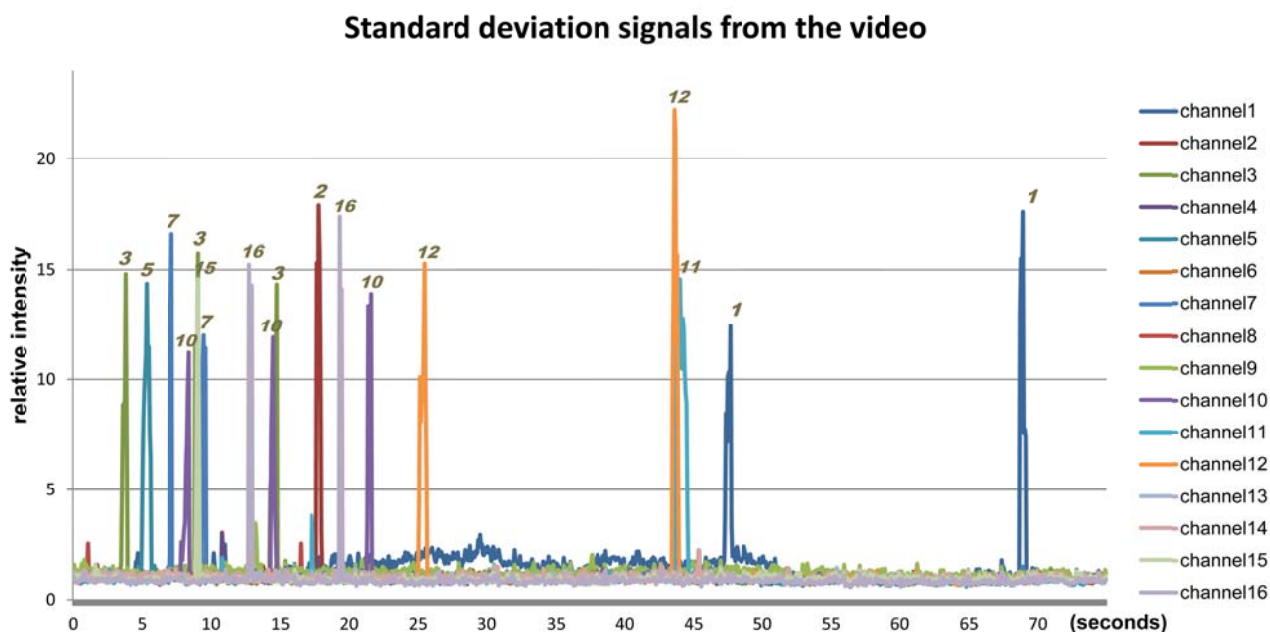


Table S1. The time points of the L1 worms passing through each channel in the **Video S1**. (unit: seconds)

channel1	channel2	channel3	channel4	channel5	channel6	channel7	channel8
47.5	17.7	3.9		5.4		7.1	
68.8		8.9				9.4	
		14.7					
channel9	channel10	channel11	channel12	channel13	channel14	channel15	channel16
	8.5	44.1	25.5			9.1	12.8
	14.5		43.7				19.4
	21.5						

Table S2. The progeny number every 4 hours of the worms in **Figure 4a**.

hours	N2_channel1	N2_channel2	N2_channel3	N2_channel4	daf-2_channel1	daf-2_channel2	daf-2_channel3	daf-2_channel4
4	8	13	9	9	7	7	8	6
8	5	5	3	8	7	7	9	8
12	4	5	3	5	11	13	8	3
16	10	5	5	8	3	4	4	1
20	7	8	8	8	7	4	4	4
24	7	4	7	3	7	1	6	3
28	6	4	9	6	10	0	2	4
32	7	8	3	7	11	2	4	2
36	4	1	4	3	2	4	4	3
40	3	0	4	6	6	5	6	4
44	10	1	4	7	2	3	6	3
48	4	0	3	8	1	3	2	1
52	2	1	3	4	2	2	3	2
56	4	3	3	6	4	2	1	1
60	2	2	4	7	1	1	7	0
64	0	3	4	6	0	6	2	8
68	2	3	1	6	0	0	1	2
72	2	1	1	3	0	0	2	1
76	2	5	2	2	2	3	1	2
80	2	1	2	3	1	0	2	1
84	2	3	1	5	0	0	2	5
88	1	4	0	4	0	1	5	1
92	0	0	2	5	1	0	1	1
96	4	3	1	1	0	0	6	0
100	0	2	0	0	0	2	0	1
104	0	1	0	3	0	0	0	0
108	0	0	0	2	0	0	0	3
112	0	0	1	1	2	2	5	0
116	0	0	0	2	0	0	3	0
120	0	0	0	0	0	1	0	2
124	0	0	0	0	0	0	0	0
128	0	0	0	1	1	2	0	2
132	0	0	0	0	0	0	2	0
136	0	0	0	0	0	0	2	0
140	0	0	0	0	0	0	2	0
144	0	0	0	0	2	0	0	0
148	0	0	0	0	0	0	0	0
152	0	0	0	0	0	0	0	0
156	0	0	0	0	0	0	0	2
160	0	0	0	0	0	3	3	0
164	0	0	0	0	0	0	0	0
168	0	0	0	0	0	0	0	0
172	0	0	0	0	0	0	0	0
176	0	0	0	0	0	0	0	0
180	0	0	0	0	0	0	2	1
184	0	0	0	0	0	0	0	0
188	0	0	0	0	0	0	1	1
192	0	0	0	0	0	0	0	0
196	0	0	0	0	0	0	0	0
200	0	0	0	0	0	0	0	0
204	0	0	0	0	0	0	0	1
208	0	0	0	0	0	0	0	1
212	0	0	0	0	0	0	0	0
216 & more	0	0	0	0	0	0	0	0

Figure S5. All the N2 and *daf-2* progeny traces from one microfluidic experiment. The top 13 worms are N2 and the bottom 15 worms are *daf-2* mutants. The number at the end of each trace represents the total progeny, and the “*” means the worm was either bagged, or dead, or lost after the last progeny peak and thus censored at that point. For wild type worms in the microfluidic experiment, the bagging rate is $3/13 = 23\%$. For *daf-2(e1370)* worms in this microfluidic experiment, two worms (#1 and #7) died early (before Day 2), which was most likely due to the mechanical stress during transferring and loading. One worm (#14) slipped out of its chamber by accident. For the other 12 worms, 5 bagged during their reproduction period, the bagging rate is $5/12 = 41.7\%$.

