Electronic Supplementary Material (ESI) for RSC Advances.
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Supporting Information

The HepG2 cells were directly frozen in channel I and thawed after 15 d of storage. Cell culture medium was infused to the channel to replace the freezing medium 8 h after thawing. Cells adhering to the glass surface are shown in Fig. S1(a) and Fig. S1(b), with the objective magnifications of 4× and 10×, respectively. These cells were not washed away during the medium change process. During the following 16 h, these adhering cells spread, grew, and reached 90% confluence, as shown in Figs. S1(c) and S1(d).

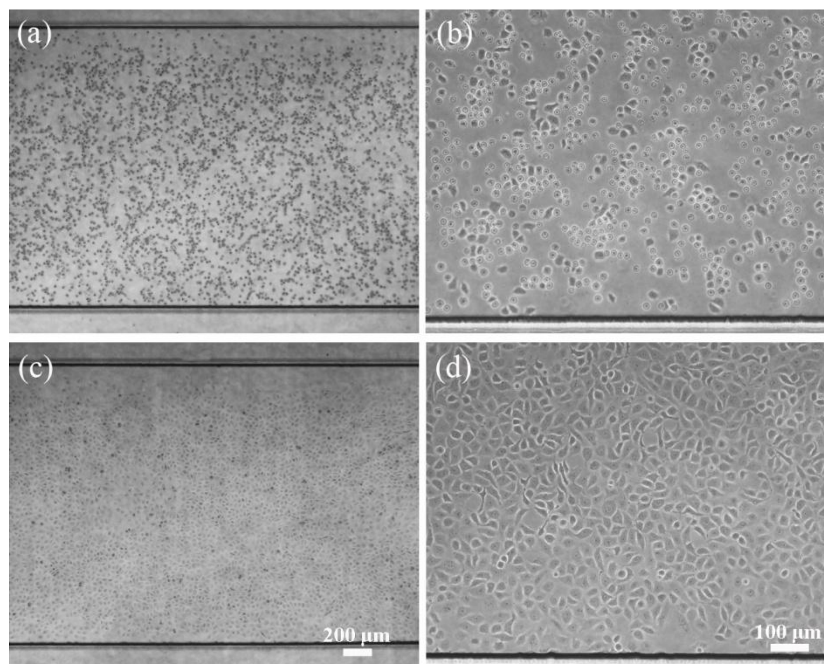

Fig. S1 Images of the HepG2 cells in channel I (4 cm × 2 mm × 100 μm), thawing after 15 d cryopreservation, (a) and (b): 8 h after thawing, (c) and (d): 24 h after thawing. The objective magnifications were 4× (left) and 10× (right).

The SKBR3 cells were directly frozen in channel II and thawed after 10 d of storage. Cell culture medium was infused to the channel to replace the freezing medium 8 h after thawing. Cells adhering to the glass surface are shown in Fig. S2(a). These cells were not washed away during the medium change process. After another 16 h, these adhering cells spread and grew, as shown in Fig. S2(b).

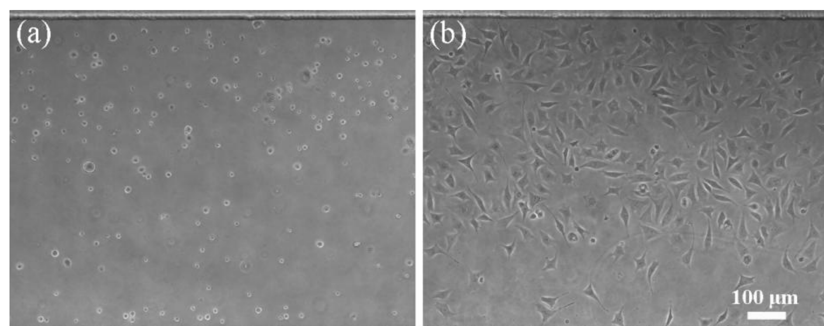

Fig. S2 Images of the SKBR3 cells in channel II (1 cm × 900 μm × 60 μm), thawing after 10 d cryopreservation, (a): 8 h after thawing, (b): 24 h after thawing. The objective magnifications were 10×.

The 3T3 cells were directly frozen in channel I and thawed after four months of storage. Cell culture medium was infused to the channel to change the freezing medium 8 h after thawing. Cells adhering to the glass surface are shown in Figs. S3(a) and S3(b) with the objective magnifications of 4× and 10×, respectively. During the next 2 d, these adhering cells spread and grew in the channel, as shown in Figs. S2(c) to S2(f).

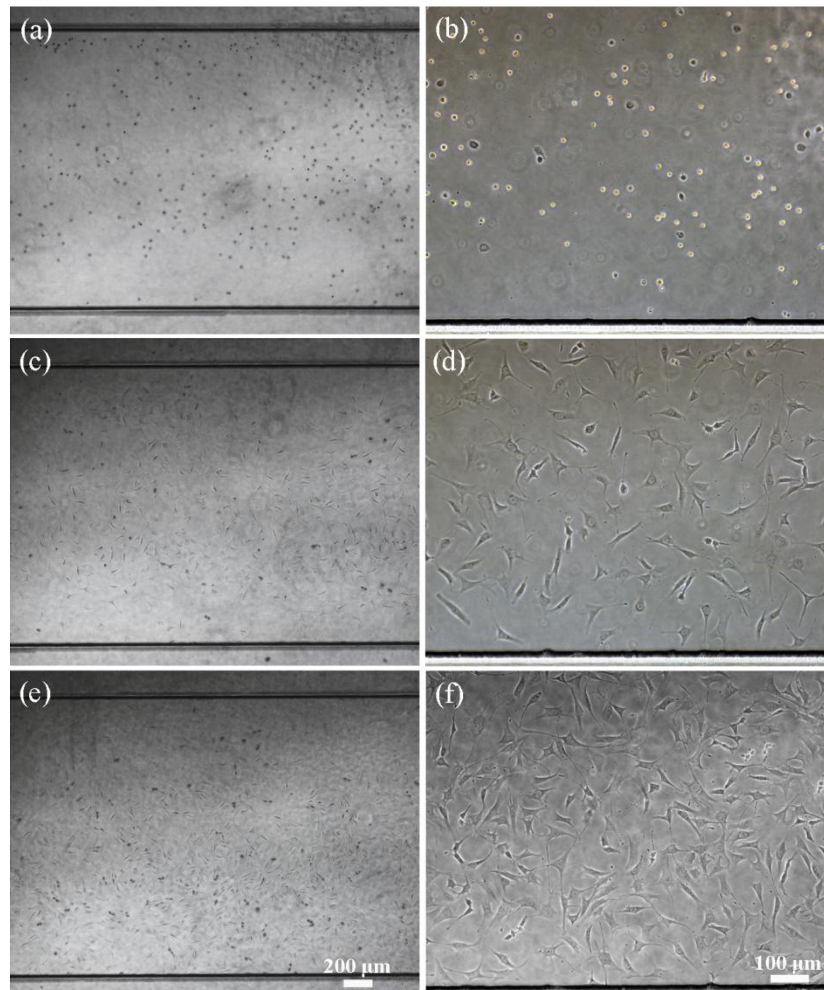

Fig. S3 Images of the 3T3 cells in channel I, thawing after four months cryopreservation, (a) and (b): 8 h after thawing, (c) and (d): 32 h after thawing, (e) and (f): 48 h after thawing. The objective magnifications were 4× (left) and 10× (right).

The HUVECs were directly frozen in channel I and thawed after 1 year of storage. Cell culture medium was infused to the channel to change the freezing medium 8 h after thawing. Cells adhering to the glass surface are shown in Figs. S4(a) and S4(b) with the objective magnifications of 4× and 10×, respectively. During the next 3 d, these adhering cells spread and grew in the channel, as shown in Figs. S4(c) to S4(f).

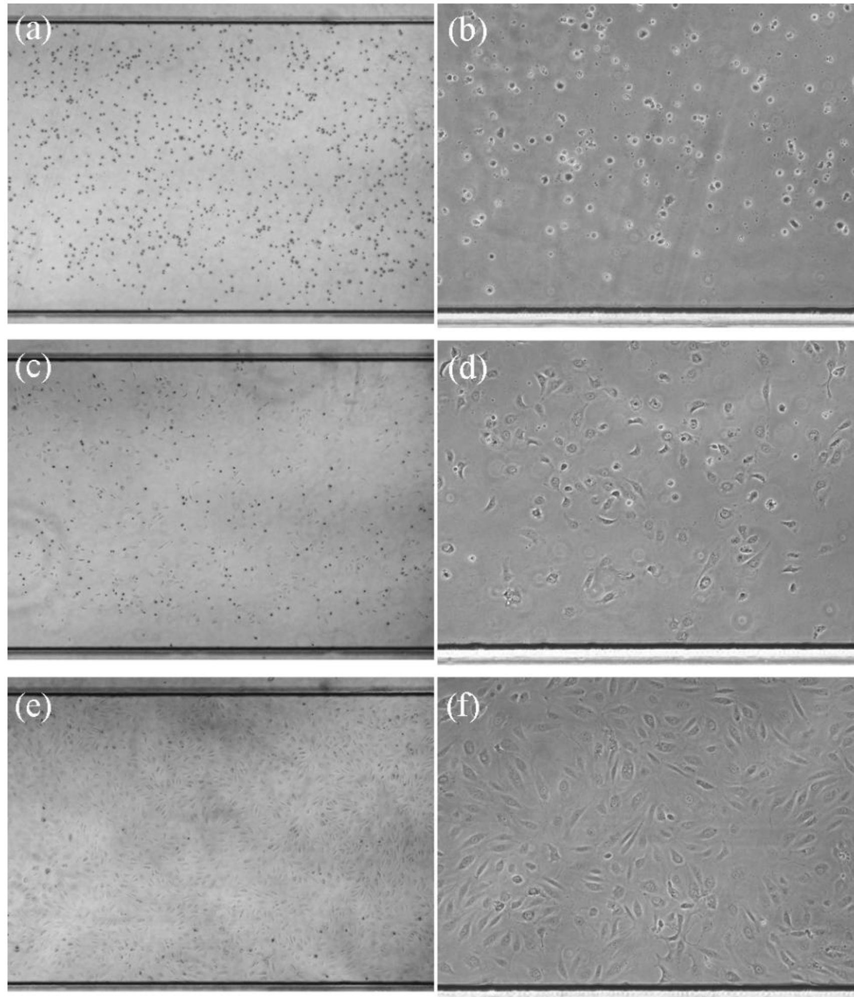

Fig. S4 Images of the HUVECs in channel I, thawing after 1 year cryopreservation, (a) and (b): 8 h after thawing, (c) and (d): 24 h after thawing, (e) and (f): 72 h after thawing. The objective magnifications were 4× (left) and 10× (right).