Electronic Supplementary Material (ESI) for Integrative Biology

Co-cultured endometrial stromal cells and peritoneal mesothelial cells for an *in vitro* model of endometriosis

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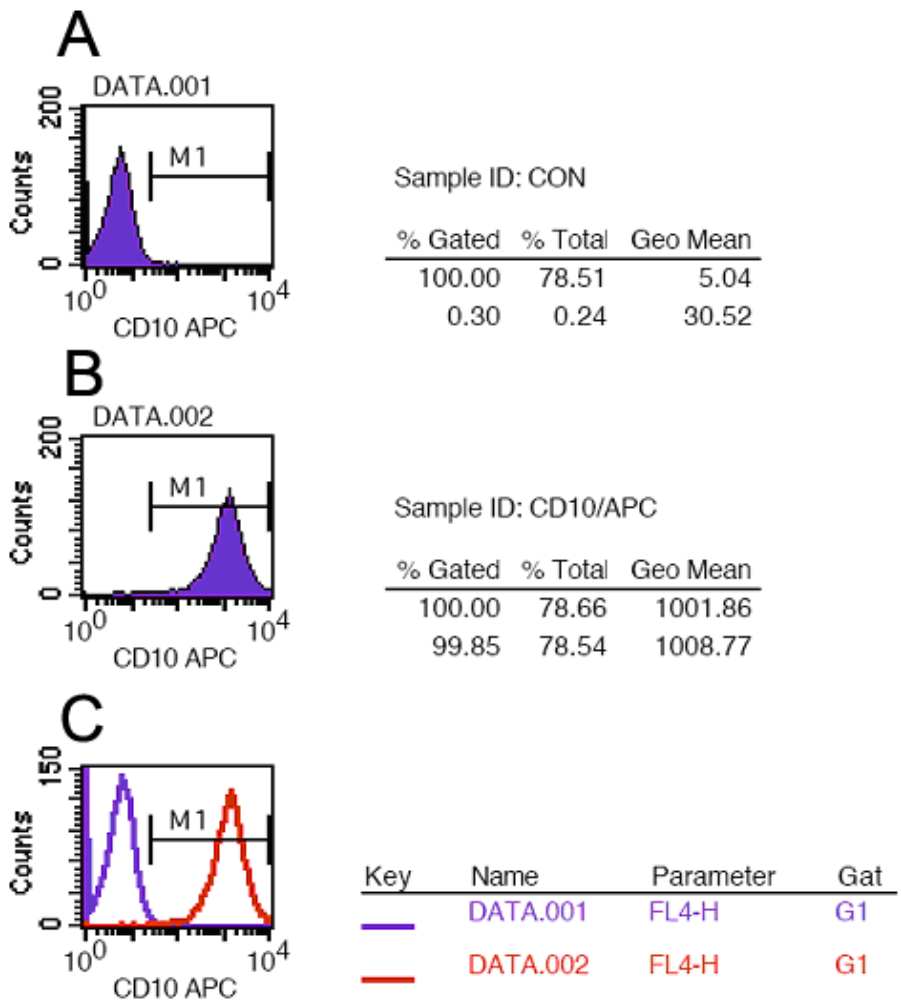
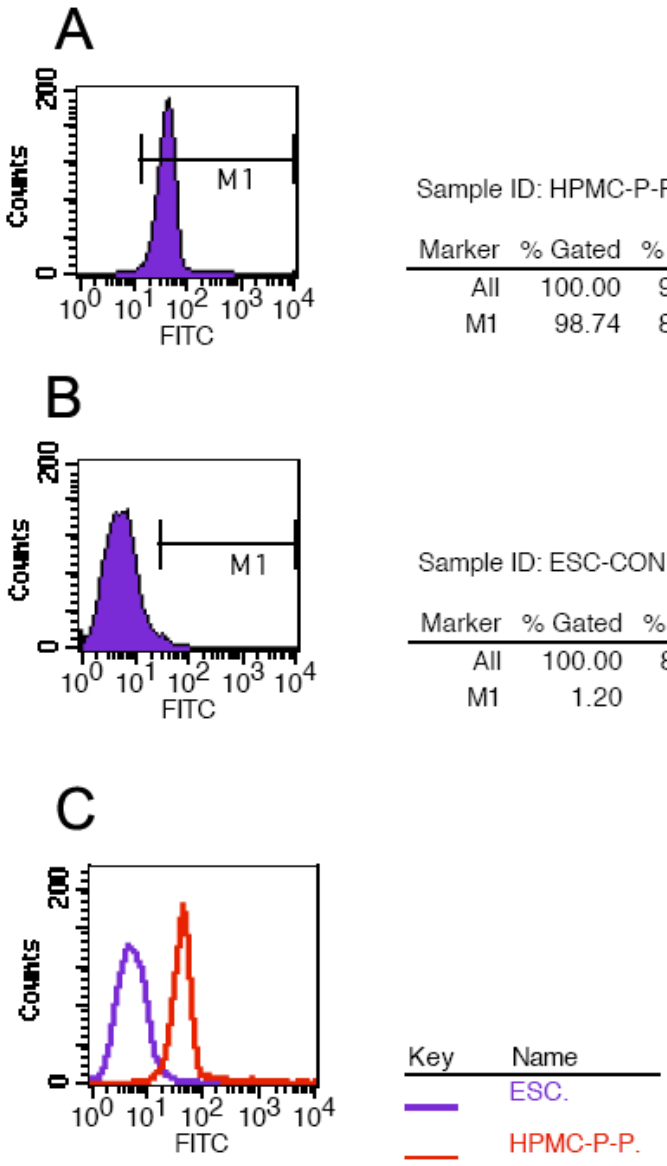
Supplementary Figure 9	Time - lapse fluorescence micrographs for interaction between ESC con cells and HPMC con cells, and compared to their growth alone.
Note 1	Go game

Supporting Information:

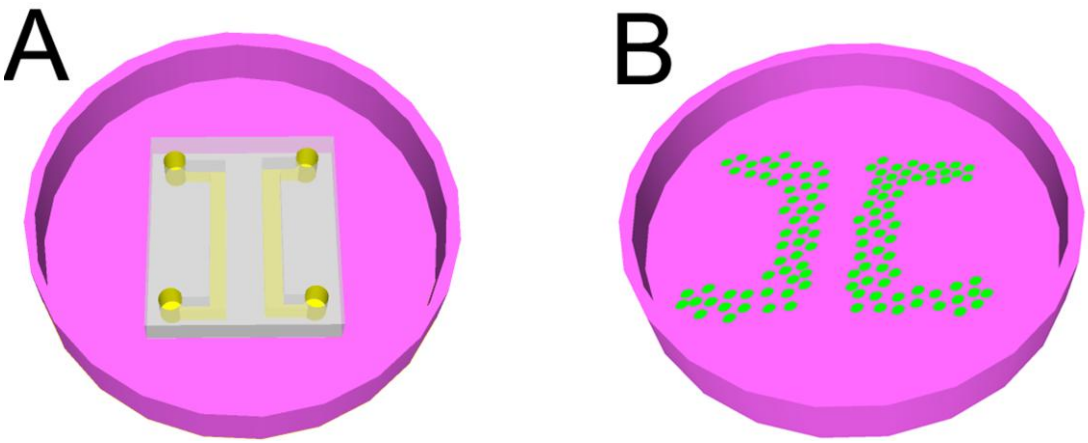


Supplementary Figure S1. Identification of ESC cells with antibody CD10-APC using flow cytometry.
ESC cells were stained with antibody CD10-APC (B&C), but HLF (Human lung fibroblasts) cells as a negative control (A&C) were not stained.

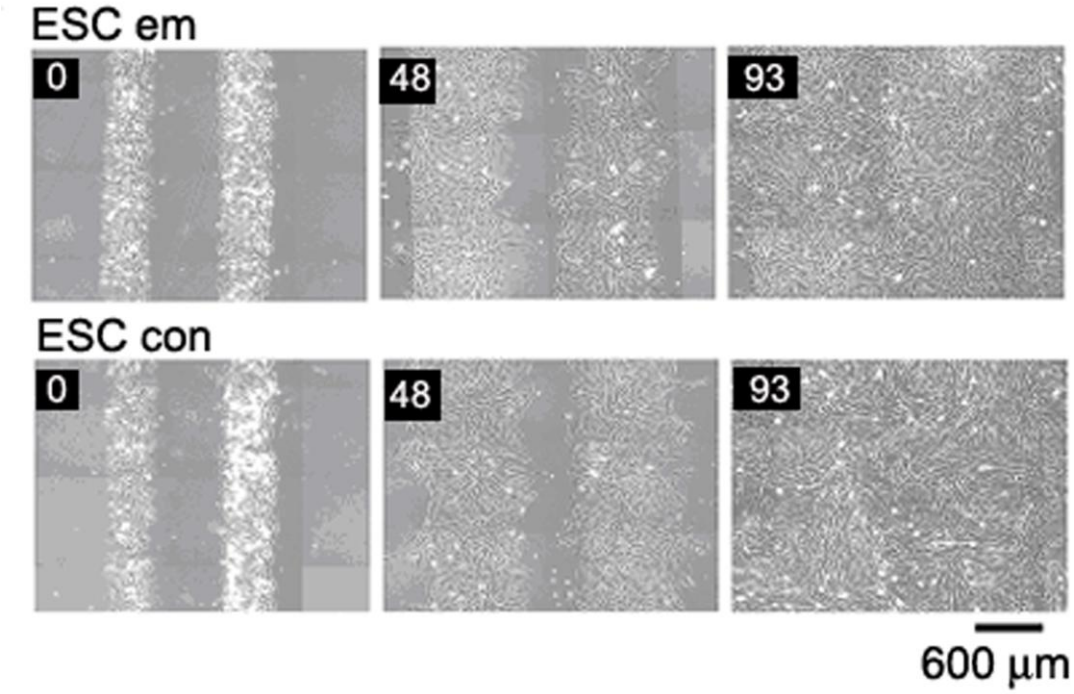


Supplementary Figure S2. Identification of HPMC cells with antibody CK8. HPMC cells were stained with primary antibody CK 8 and second antibody FITC (A&C), but ESC cells as a negative control (B&C) were not stained.

Measurement of migration speed of ESC cells and HPMC cells

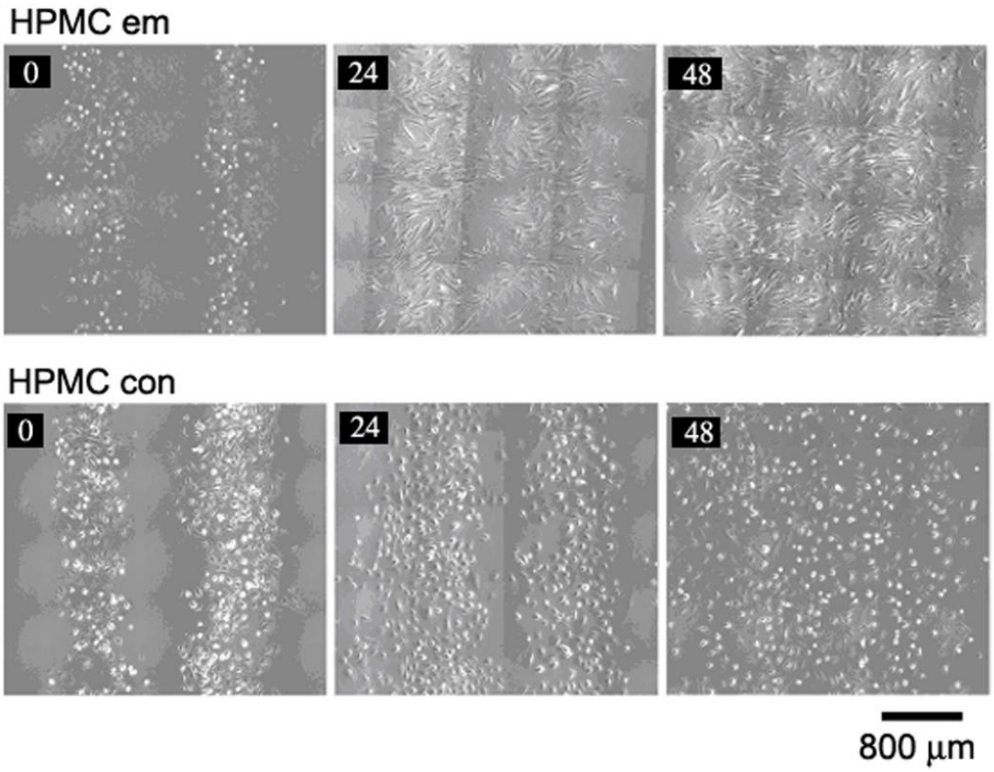


Supplementary Figure S3. Model for assessing the speed of cell migration
a) A PDMS stamp with an embedded microfluidic system came into contact with the bottom of a cell culture dish.
b) Cells were introduced, adhered and spread in microchannels. After removing the PDMS stamp, cells in the two strips migrated toward each other.

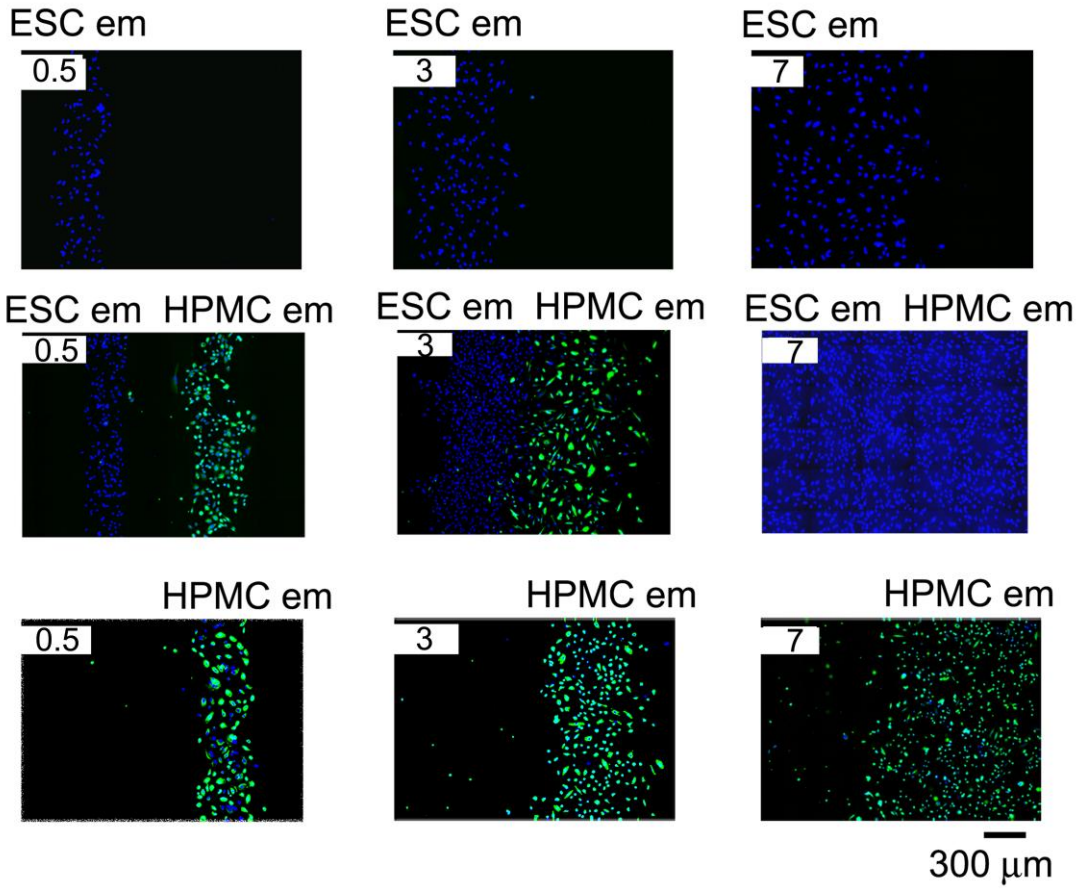


Supplementary Figure S4. Contrast-phase micrographs for measuring migration speed of ESC em/con cells. The numbers on the top of the graphs indicate the time (in hours) after peeling off the PDMS stamp.
The distance between the two strips of cells was 600 µm. ESC em cells (top) and ESC con cells (bottom) migrated and met after 93 h. There was no difference on migration observed between two types of cells. The average migration speed of ESC was ~ 3.2

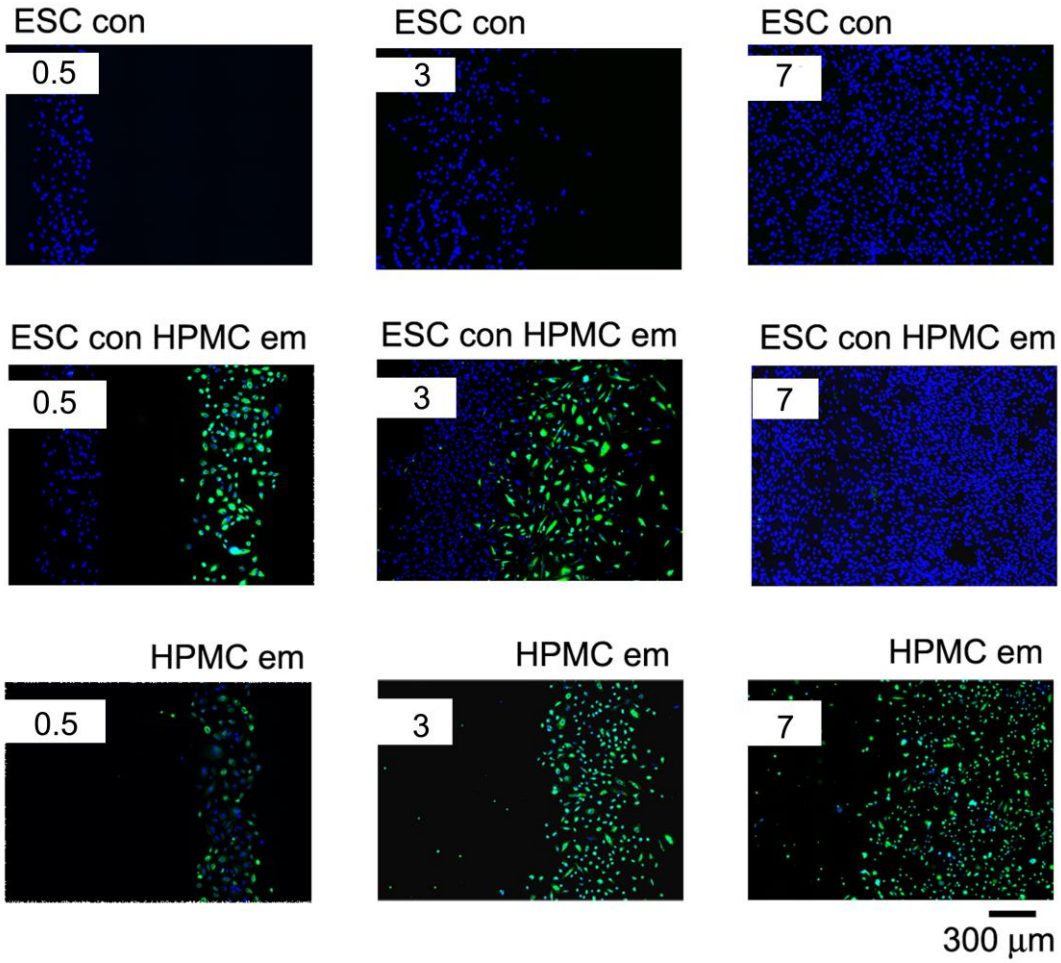
μm/h.



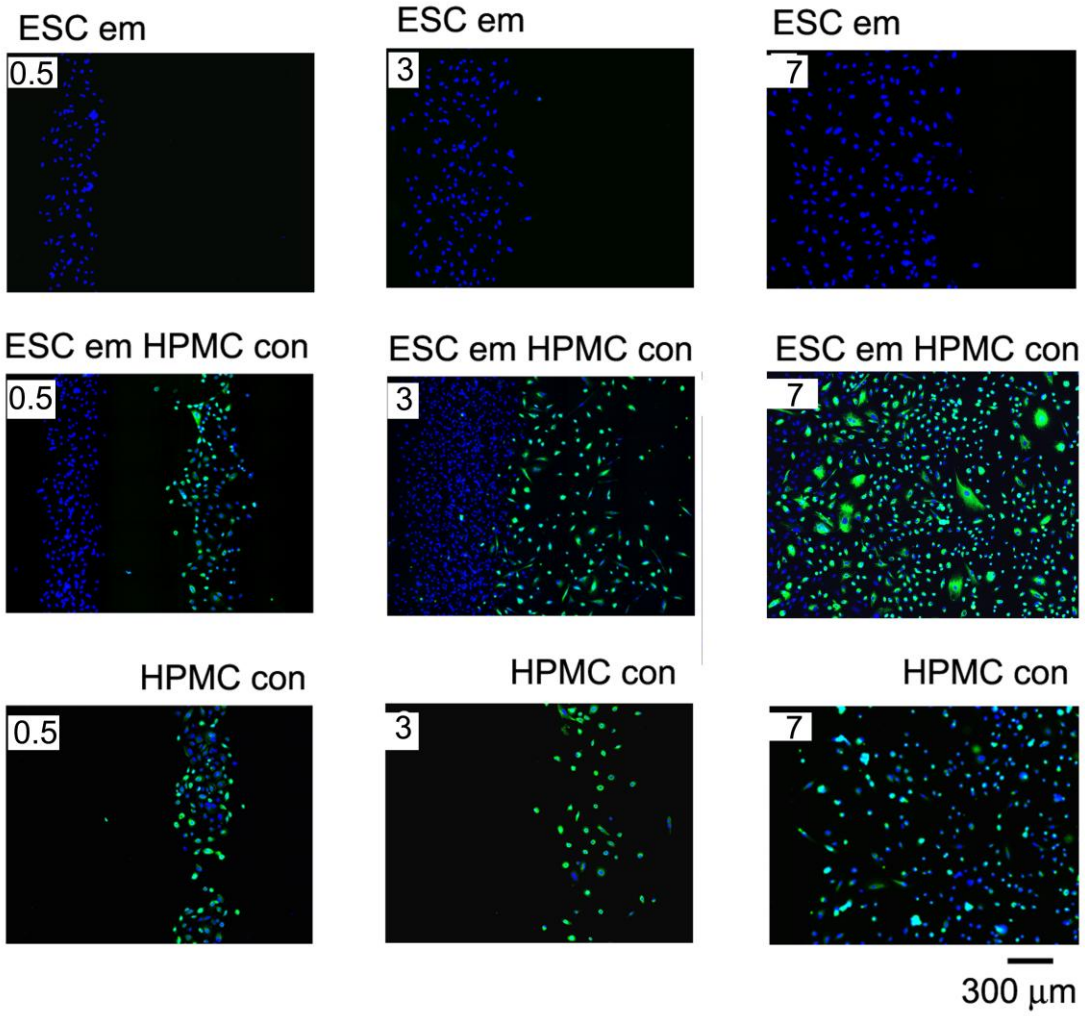
Supplementary Figure S5. Contrast-phase micrographs for measurement of migration speed of HPMC em/con cells. The numbers on the top of the graphs indicate the time (in hours) after peeling off the PDMS stamp.
The distance between the two strips of cells was 800 μm. HPMC em cells (top) and HPMC con cells (bottom) migrated and met after 42 h. There was no difference on migration observed between two types of cells. The average migration speed of HPMC was ~ 9.5 μm/h.



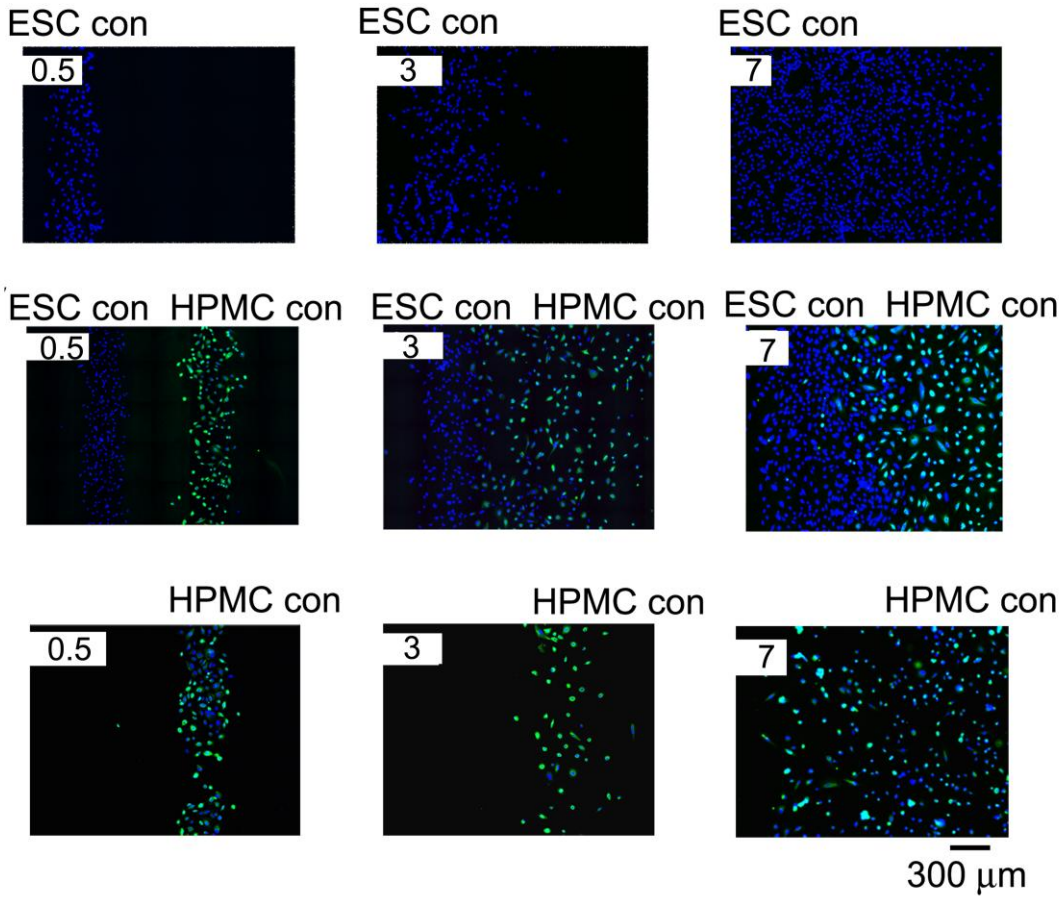
Supplementary Figure S6. Time - lapse fluorescence micrographs for interaction between ESC em cells and HPMC em cells, in comparison to their growth alone. The numbers on the top of the graphs indicate the time (in days) after peeling off the PDMS stamp. The migration speed of ESCs em toward HPMCs em was faster than that of ESCs em growth alone.



Supplementary Figure S7. Time - lapse fluorescence micrographs for interaction between ESC con cells and HPMC em cells, in comparison to their growth alone. The numbers on the top of the graphs indicate the time (in days) after peeling off the PDMS stamp. The migration speed of ESCs con toward HPMCs em was faster than that of ESCs con growth alone.



Supplementary Figure S8. Time - lapse fluorescence micrographs for interaction between ESC em cells and HPMC con cells, in comparison to their growth alone. The numbers on the top of the graphs indicate the time (in days) after peeling off the PDMS stamp.



Supplementary Figure S9. Time - lapse fluorescence micrographs for interaction between ESC con cells and HPMC con cells, in comparison to their growth alone. The numbers on the top of the graphs indicate the time (in days) after peeling off the PDMS stamp.

Note 1. Go game: the game is played by two players who alternately place black and white stones on the vacant intersections (called "points") of a grid of 19×19 lines. Once placed on the board, stones cannot be moved elsewhere, unless they are surrounded and captured by the opponent's stones. The object of the game is to secure (surround) a larger portion of the board than the opponent.