Description of Additional Supplementary Files

File name: Supplementary Movie 1

Description: 3D rendering of integrating MCC interacting with epithelial vertices.

MCC expressing α-tubulin::LifeAct-GFP (pseudo-colored in green) and goblet cells expressing nectin::Utrophin-RFP (pseudo-colored in magenta).

File name: Supplementary Movie 2

Description: 3D plots for filopodia dynamics.

Relative position of F-actin protrusions (magenta) extended by an integrating MCC (cyan) and the overlaying epithelial vertices (vertical tracks, color-coded for distance) during lateral movement.

File name: Supplementary Movie 3

Description: 3D rendering of MCC interacting with epithelial vertices.

Integrating MCC expressing α-tubulin::LifeAct-RFP (pseudo-colored in green) and goblet cells expressing LSR-3xGFP (pseudo-colored in magenta).

File name: Supplementary Movie 4

Description: LSR localizes to filopodia tips.

Integrating MCC expressing α-tubulin::LifeAct-RFP (pseudo-colored in green) and α-tubulin::LSR-GFP (pseudo-colored in magenta). Scale bar: 2 μm.

File name: Supplementary Movie 5

Description: LSR depletion blocks MCC integration.

Integrating control and LSR MO#1 MCCs expressing LifeAct-GFP (pseudo-colored in green). LSR-depleted cells using LSR MO#1 are marked with H2B-RFP (pseudo-colored in magenta). Scale bar: 20 μm.

File name: Supplementary Movie 6

Description: LSR overexpression induces the formation of ectopic filopodia.

Integrating MCC expressing α-tubulin::LifeAct-RFP (pseudo-colored in green) and α-tubulin::LSR-GFP (pseudo-colored in magenta). Scale bar: 5 μm.

File name: Supplementary Movie 7

Description: 3D rendering of filopodia pulling on epithelial vertices.

Integrating MCC expressing α-tubulin::LifeAct-RFP (pseudo-colored in green) and goblet cells expressing nectin::LSR-GFP (pseudo-colored in magenta).

File name: Supplementary Movie 8

Description: Orthogonal view of filopodia pulling on epithelial vertices.

Integrating MCC expressing α-tubulin::LifeAct-RFP (pseudo-colored in green) and goblet cells expressing nectin::LSR-GFP (pseudo-colored in magenta). Scale bar: 5 μm.

File name: Supplementary Movie 9

Description: Rosette-like structure formation during MCC integration.

Right, integrating MCCs expressing α-tubulin::LifeAct-RFP (pseudo-colored in green) and goblet cells expressing SF9-3xGFP (pseudo-colored in magenta). Left, segmented image with tracked cells pseudo-colored with different colors. Scale bar: 20 μm.

File name: Supplementary Movie 10

Description: Laser ablation of epithelial goblet cell junction.

Epithelial junctions are labeled with SF9-3xGFP (pseudo-colored in fire). Scale bar: 10 μm.

File name: Supplementary Movie 11

Description: Junction remodeling during MCC integration.

Integrating MCC expressing α-tubulin::LifeAct-RFP (pseudo-colored in green) and goblet cells expressing SF9-3xGFP (magenta). Scale bar: 5 μm.

File name: Supplementary Movie 12

Description: Junction retraction after contact loss.

Integrating MCC expressing α-tubulin::LifeAct-RFP (pseudo-colored in green) and goblet cells expressing SF9-3xGFP (pseudo-colored in magenta). Scale bar: 10 μm.

File name: Supplementary Movie 13

Description: Orthogonal view of MCC vertex retraction after contact loss.

Integrating MCC expressing α-tubulin::LifeAct-RFP (pseudo-colored in green) and goblet cells expressing LSR-3xGFP (pseudo-colored in magenta). Scale bar: 5 μm.

File name: Supplementary Movie 14

Description: Myosin II is recruited to the leading edge of integrating MCCs.

Goblet cells and MCC expressing SF9-3xGFP (pseudo-colored in magenta). Integrating MCC expresses MCC marker α-tubulin::LifeAct-RFP (pseudo-colored in green). Scale bar: 10 μm.

File name: Supplementary Movie 15

Description: Myosin II downregulation blocks junction remodeling and cell integration.

Goblet cells and CA-MYPT overexpressing MCC expressing LifeAct-GFP mRNA (pseudo-colored in green). CA-MYPT overexpressing MCC is labeled with H2B-RFP (pseudo-colored in magenta). Scale bar: 10 μm.