

## Description of Additional Supplementary Files

File Name: Supplementary Movie 1

Description: **Localization of lysosomes during DC migration in a confined 3D environment.**

BMDCs were labeled with 1 mM AcidiFluor ORANGE and stimulated with LPS for 2 h.

Movement of DCs and AcidiFluor-positive lysosomes (magenta) in response to CCL19 (5 µg/ml) in type I collagen gel (2 mg/ml) in a Zigmond chamber was observed at 1-min intervals by time-lapse video imaging.

File Name: Supplementary Movie 2

Description: **Directional migration of WT DCs in response to CCL19 in a 2D environment.**

Horizontal migration of WT BMDCs in response to CCL19 (5 µg/ml) in an EZTAXIScan device (slit size, 5 µm) was visualized at 1-min intervals by time-lapse video imaging

File Name: Supplementary Movie 3

Description: **Directional migration of Lamtor1<sup>-/-</sup> DCs in response to CCL19 in a 2D environment.** Horizontal migration of Lamtor1<sup>-/-</sup> BMDCs in response to CCL19 (5 µg/ml) in an EZ-TAXIScan device (slit size, 5 µm) was visualized at 1-min intervals by time-lapse video imaging.

File Name: Supplementary Movie 4

Description: **Motility of WT DCs in response to CCL19 in 3D collagen matrices.** Movement of WT BMDCs in response to CCL19 (5 µg/ml) in type I collagen gels (2 mg/ml) in a Zigmond chamber was observed at 1-min intervals by time-lapse video imaging

File Name: Supplementary Movie 5

Description: **Motility of Lamtor1<sup>-/-</sup> DCs in response to CCL19 in 3D collagen matrices.**

Movement of Lamtor1<sup>-/-</sup> BMDCs in response to CCL19 (5 µg/ml) in type I collagen gels (2 mg/ml) in a Zigmond chamber was observed at 1-min intervals by time-lapse video imaging