

Supplemental Movie 1. *Real-time imaging of intraluminal migration of CX₃CR1⁺ cells.* *InvA⁻AroA⁻Salmonella* were introduced into intestinal isolated loops and migration of fluorescent CX₃CR1^{+gfp} cells was monitored (XY plan) by two-photon microscope. Two hours after the application of the bacterial challenge, CX₃CR1^{+gfp} cell (red circle) protruded into the intestinal lumen from the surface of the intestinal epithelium, and after migrating completely into the lumen subsequently moved away following a non-linear trajectory (red line) from the site of entry. The movie also shows that the imaged cell was immediately followed by another CX₃CR1^{+gfp} cell protruding via the same opening in the epithelium. Lapse time is shown on the upper left corner of video; Scale bar =10μm.