Electronic Supplementary Material (ESI) for Integrative Biology.

Supplementary Materials

The Arp 2/3 Complex Binding Protein HS1 is Required for DC Random Migration and Force Generation

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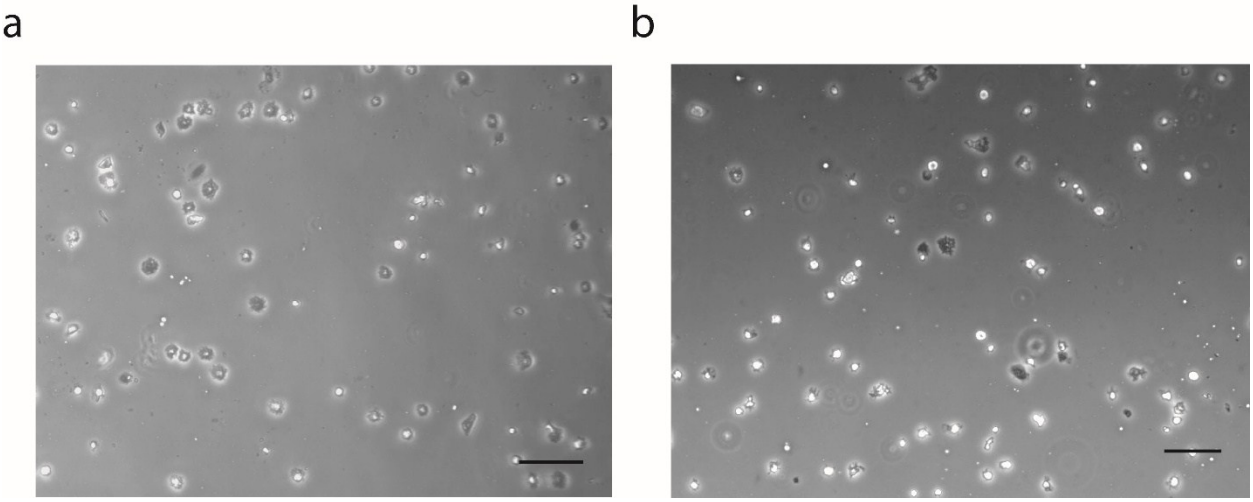
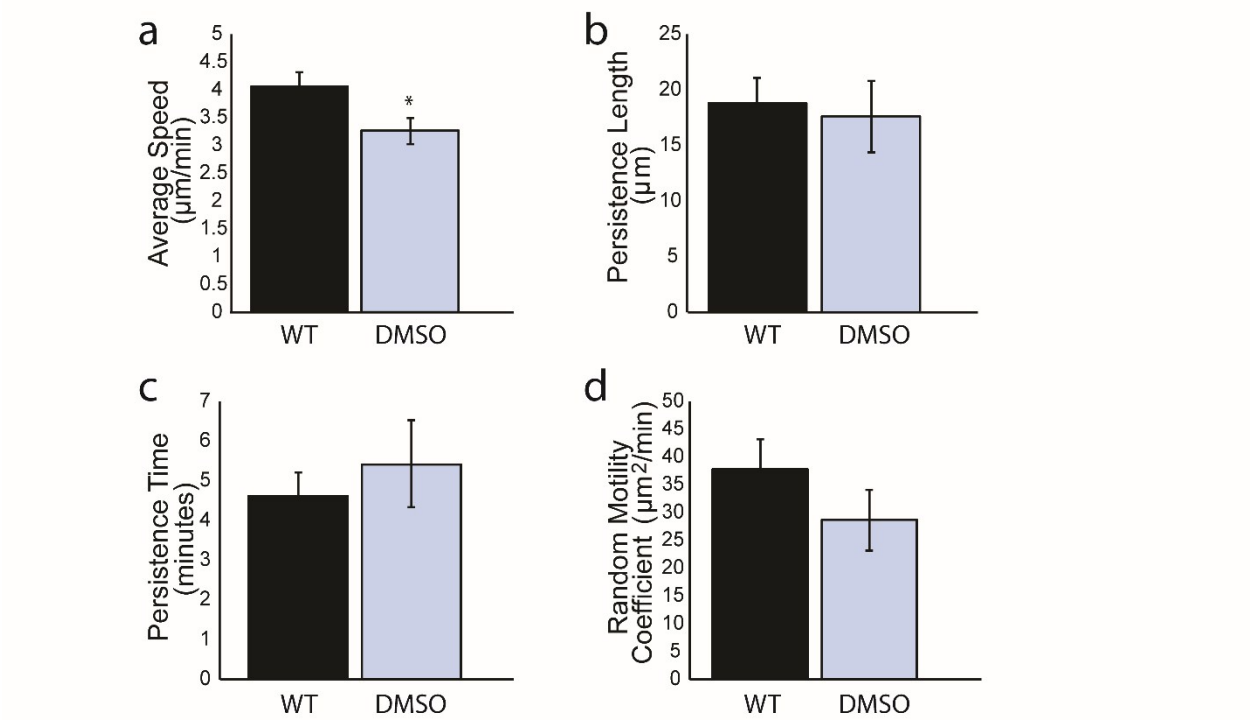


Supplementary Figure 1. HS1 $^{-/-}$ DCs are morphologically similar to WT DCs. Phase contrast images of WT DCs (a) and HS1 $^{-/-}$ DCs (b). Images are snapshots from longer, time course experiments. Cells are plated on 10 μg/mL fibronectin and are migrating in the presence of 10 nM CCL19. Scale bar represents 100 μm.



Supplementary Figure 2. Quantification of WT DC chemokinesis in the presence of DMSO (a) average speed, (b) persistence length and (c) persistence time, (d) random motility coefficient. Figures represent average values ± SEM, for > 675 DCs from at least three independent experiments per condition. Statistical significance calculated with single factor ANOVA and post hoc Tukey test. Indicates significant difference compared to WT DCs. *$p<0.05$, **$p<0.01$

Supplementary Video 1. Phase contrast video of WT DC Chemokinesis. Cells are plated on 10 μg/mL fibronectin and are migrating in the presence of 10 nM CCL19.

Supplementary Video 2. Phase contrast video of HS1 $^{-/-}$ DC Chemokinesis. Cells are plated on 10 μg/mL fibronectin and are migrating in the presence of 10 nM CCL19.

Supplementary Video 3. Fluorescent video of GFP Life-act DCs. Filopodia and lamellipodia form at the leading edge and are relatively stable. Cells are plated on 10 μg/mL fibronectin and are migrating in the presence of 10 nM CCL19.

Supplementary Video 4. Fluorescent video of HS1 $^{-/-}$ DCs transduced with GFP Life-act. Stable lamellipodia fail to form at the leading edge and dynamic membrane ruffling is observed. Cells are plated on 10 μg/mL fibronectin and are migrating in the presence of 10 nM CCL19.