

## **Description of Additional Supplementary Files**

### **File name: Supplementary Data 1**

Description: Tabulated phosphoproteomics data, organized by phosphopeptide, comparing BMDMs engulfing stiff (18 kPa) IgG-coated DAAM particles to BMDMs engulfing soft (0.6 kPa) IgG-coated DAAM particles. P-values calculated by two-tailed t-test, adjusted using the Bonferroni correction.

### **File name: Supplementary Movie 1**

Description: Live imaging of stiff cargo phagocytosis. Representative time-lapse microscopy videos at 63× magnification of HoxB8-ER derived macrophages transduced with f-tractin mCherry (magenta) phagocytosing 18 kPa IgG-coated DAAM particles (green, yellow arrows). All three examples display rapid uptake in less than 5 min. For each example, a 3D maximum intensity projection (rendered in Imaris) is displayed followed by orthogonal angles, slices chosen to capture as much of the phagocytic process as possible.

### **File name: Supplementary Movie 2**

Description: Live imaging of phagocytic stalling on soft cargo. Representative timelapse microscopy videos at 63× magnification of HoxB8-ER derived macrophages transduced with f-tractin mCherry (magenta) interacting with 0.6 kPa IgG-coated DAAM particles (green, yellow arrows). In both examples, phagocytosis does not complete.

### **File name: Supplementary Movie 3**

Description: Live imaging of soft cargo phagocytosis. An additional video showing a HoxB8-ER macrophage expressing f-tractin mCherry (magenta) interacting with a 0.6kPa IgGcoated DAAM particle (green). At the start of the time-lapse, engulfment had proceeded to ~75% completion, but remained incomplete for an additional 8 min while exhibiting stereotypical features of stalled phagocytosis (central actin protrusions, particle deformation). Shortly thereafter, however, phagocytosis completed. An oblique slice of the f-tractin-mCherry signal along the axis of the phagocytic cup is shown for clarity.