Supplemental Information

Integrated Analysis of Intracellular Dynamics of MenaINV Cancer Cells in a 3D Matrix

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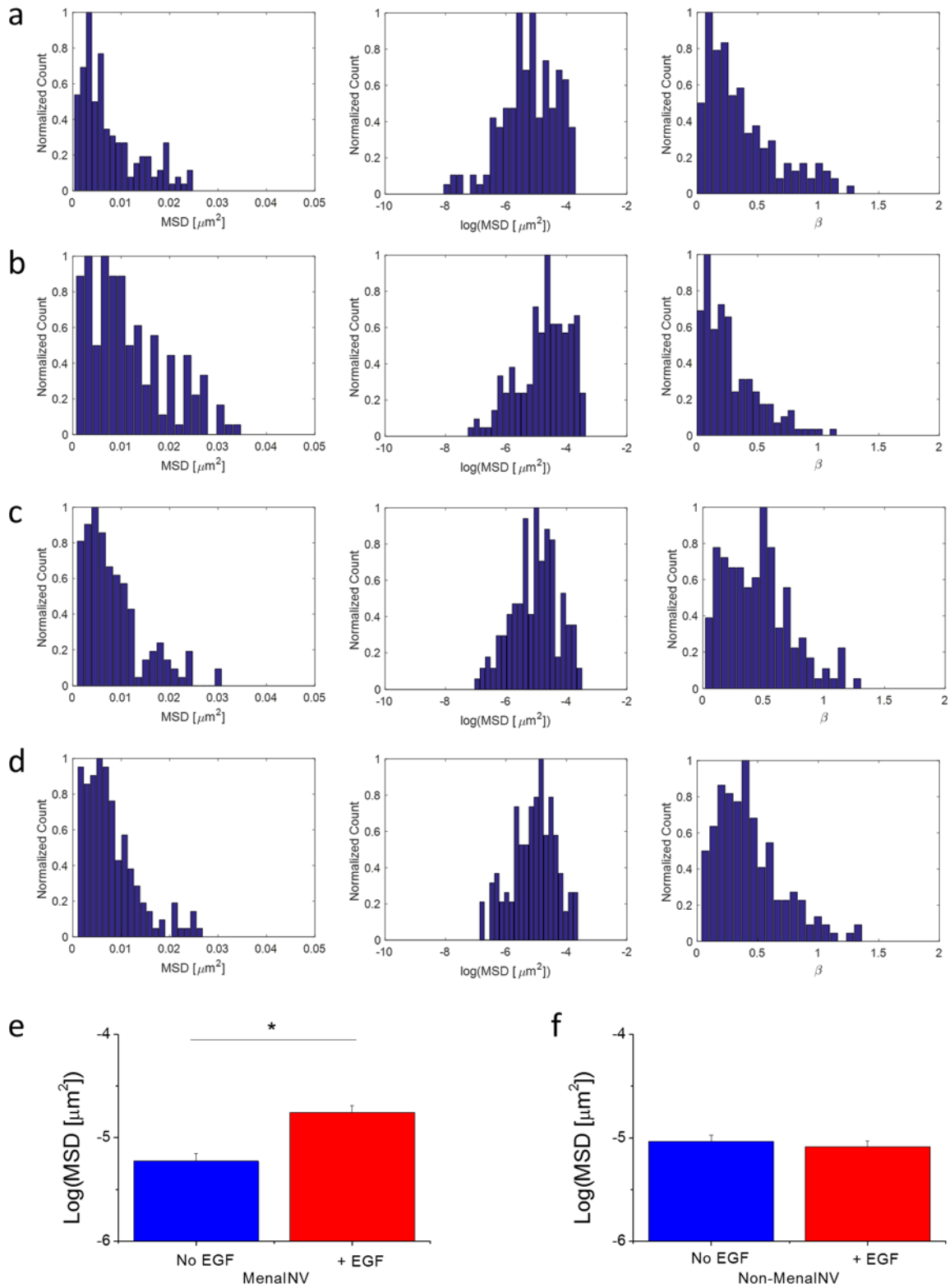
SI Figure 1: Distributions of MSDs and β's. Normalized distributions for MSD at 0.05s, log(MSD) at 0.05s, and β at 1s for MDA-MB-231 cells with the conditions: (a) MenaINV overexpression and no EGF, (b) MenaINV overexpression and 5nM EGF, (c) non-MenaINV overexpression and no EGF, and (d) non-MenaINV overexpression and 5nM EGF. Comparison of the ensemble averaged log(MSD) at t = 0.05s between with and without EGF stimulation for cells (e) with MenaINV overexpression and (f) without MenaINV overexpression. * indicates p < 0.01.
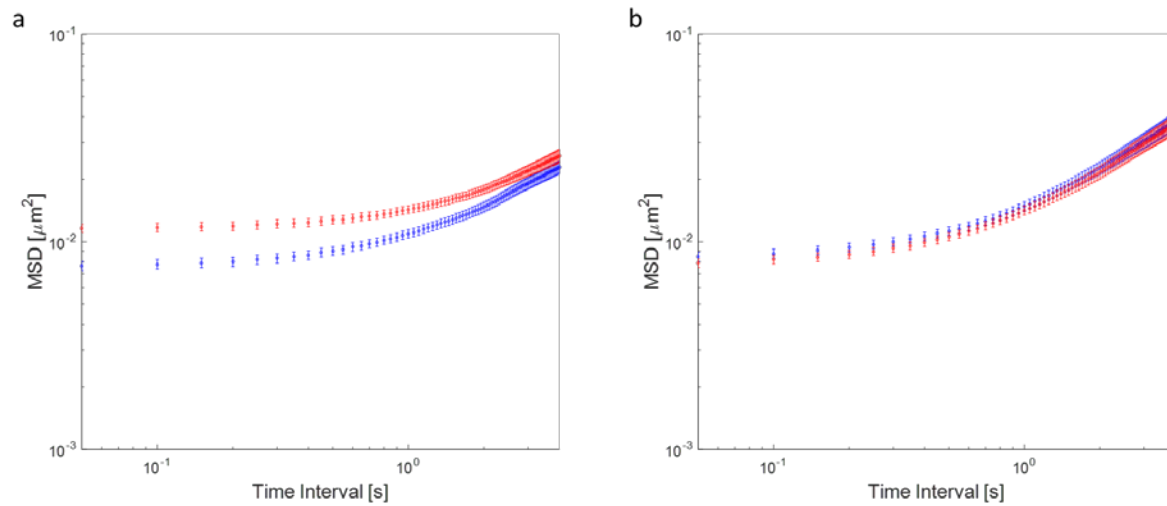
SI Figure 2: MSDs with error bars. MSDs of MDA-MB-231 cells (a) with overexpression of MenaINV and (b) without overexpression of MenaINV. Red corresponds to treatment with EGF and blue corresponds to no treatment. Error bars are s.e.m.
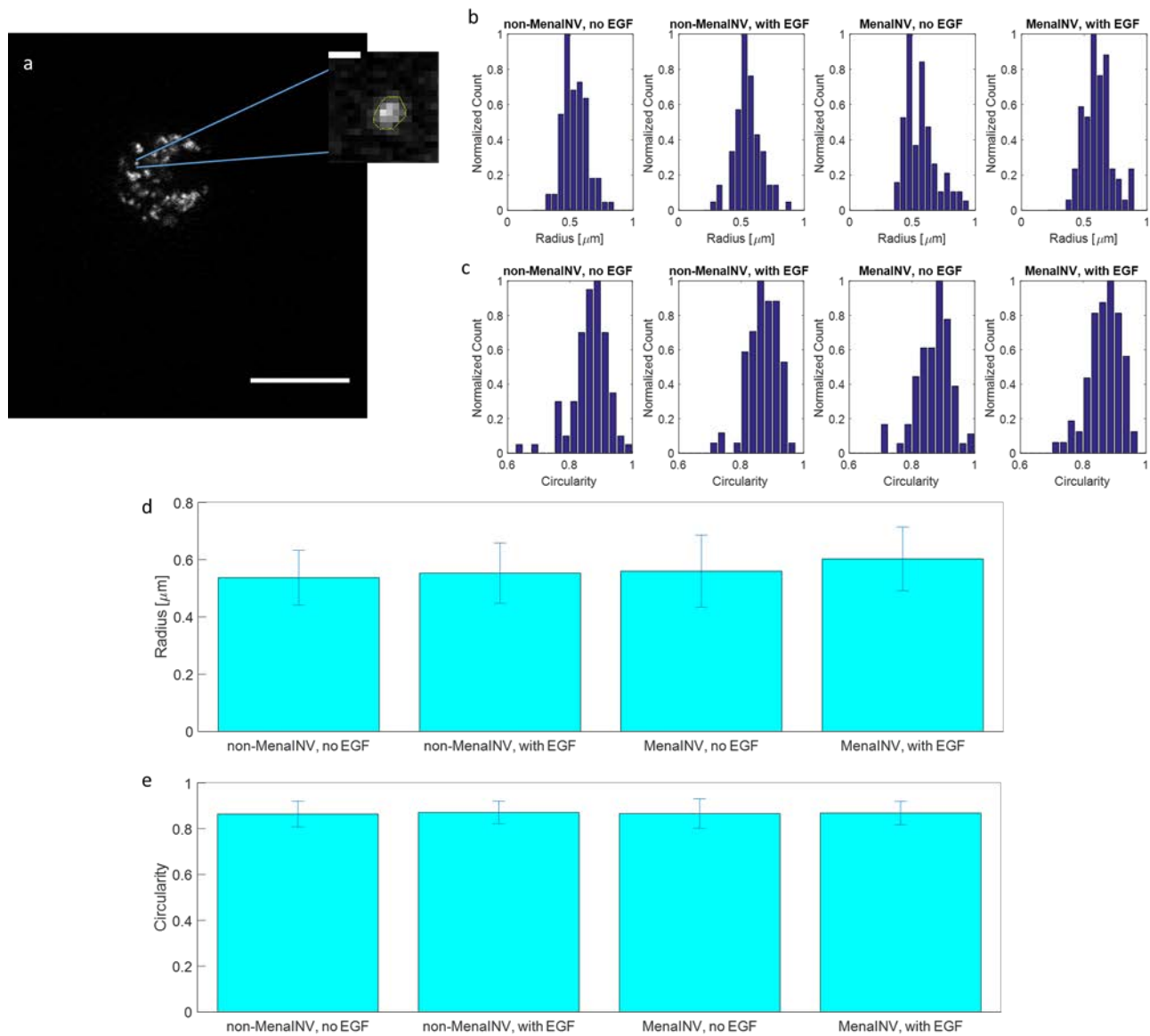
SI Figure 3: Mitochondria size and shape. a) Labeled mitochondria were manually segmented (inset) and their size and shape parameters were calculated. Specifically, we computed the circularity, defined as 4π area/perimeter^2, and the radius of the circle with equivalent area to the segmented shape. Scale bar of the larger image is 20µm and scale bar of the inset is 1µm. b ,c) Normalized distributions of the calculated radii (b) and circularity (c) for each experimental condition tested (n ≥ 80 mitochondria for each condition). d, e) Average radius (d) and circularity (e) for each experimental condition. Error bars are standard deviations.