



**Figure S1.** Stress-strain curves for PEGDA hydrogels. 0:1 (control) and 4:1 alloc to acrylate conditions. It can be seen that the hydrogels undergoing compression experience an elongated toe region before reaching the linear region. This linear region, corresponding to 65-70% strain, is outlined with a red box. The slope of this linear region was taken as the compressive modulus of each hydrogel.