## Supplementary

Figure S1: Size (area) distribution of A) circle, B) triangle, and c) rectangle hydrogel particles before and after swelling.

Fig S2: Comparison of swelling ratio of the shape-encoded hydrogel particles. The particles were incubated in PBS for 9 days at $37{ }^{\circ} \mathrm{C}$ and the sizes of particles before and after swelling were analyzed. Error bars are S.E.M (N=3).

Fig S3: Typical images of hydrogel particles incubated with $2500 \mathrm{pg} / \mathrm{ml}$ of A) VEGF, B) FGF, and C) PDGF and the corresponding fluorescent intensity profiles within circle, triangle, and rectangle- shaped hydrogel particles.

Figure S1
A)
B)


C)



Figure S2


Figure S3
A)


B)


C)



