

Supporting Information

Anisotropic hydrogel fabricated by controlled diffusion as bio-scaffold for the regeneration of cartilage injury

Xiaotian Yu^{1,2,3#}, Zhantao Deng^{1#}, Han Li^{1,2#}, Yuanchen Ma¹, Xibo Ma^{3,4} and Qiujian Zheng^{1,5*}

1 Department of Orthopedics, Guangdong Provincial People's Hospital, Guangdong Academy of Medical Sciences

2 Guangdong Cardiovascular Institute, Guangzhou, Guangdong, China

3 CBSR&NLPR, Institute of Automation, Chinese Academy of Sciences, Beijing, China.

4 School of Artificial Intelligence, University of Chinese Academy of Sciences, Beijing, China.

5 The Second School of Clinical Medicine, Southern Medical University

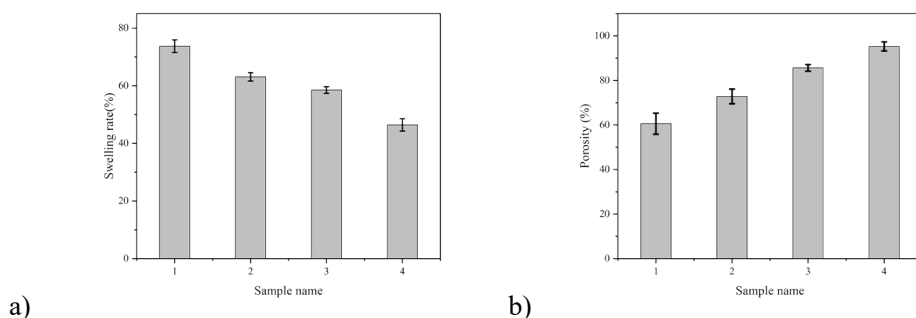
#: These author contributed equally in the work

*: Correspondence:

Qiujian Zheng: zhengqiujian@gdph.org.cn

a) b)

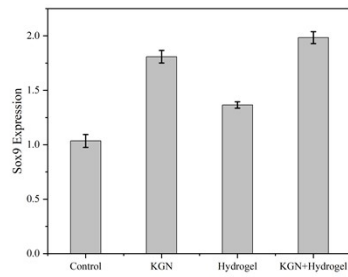
Figure S1. Other anisotropic hydrogel fabricated by control diffusion method: a) A-B type two-layer hydrogel; b) A-B-C type three layer hydrogel.



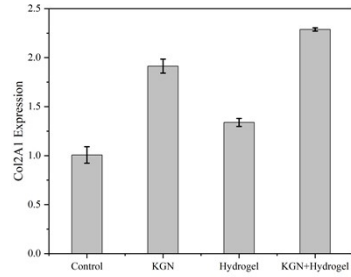
a)

b)

Figure S2. The swelling ration (a) and porosity (b) of prepared gradient hydrogel.



a)



b)

Figure S3. The chondrogenic marker expression levels of the cells in different groups: a) Sox9; b) Col2A1.

RB-GAPDH-F3	TAAGAGCCCTCAAACCACCG
RB-GAPDH-R3	AAGAGGGGCAGATTCTCAGC
RB-SOX9-F1	TCTGGAGACTGCTGAACGAG
RB-SOX9-R1	CTGCCATTCTTCACCGACTT
RABBIT-COL2A1(Col1ageIIa1)-F2	TGCAGGAGGGGAAGAGGTAT
RABBIT-COL2A1(Col1ageIIa1)-R2	GGCAGTCCTTGGTGTCTTCA
RB-ACAN(Aggrecan)-F3	GGTCTGGACAGGTGCTATGC
RB-ACAN(Aggrecan)-R3	GGTAGACGGTTCTCACACCG

Table 1. The primer information of qT-pcr measurement