Supplementary material

This PDF file includes:

Fig. S1 to S3

Table S1 to S2

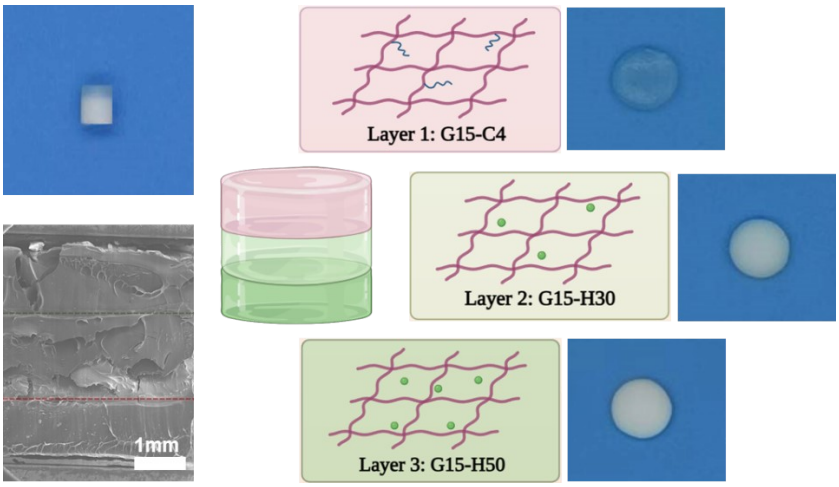

Fig. S1 Images of the integrated triphasic scaffold.

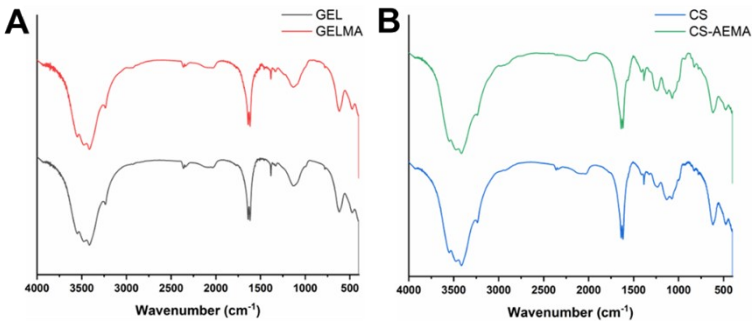

Fig. S2 FTIR spectra of (A) GEL and GELMA, (B) CS and CS-AEMA.

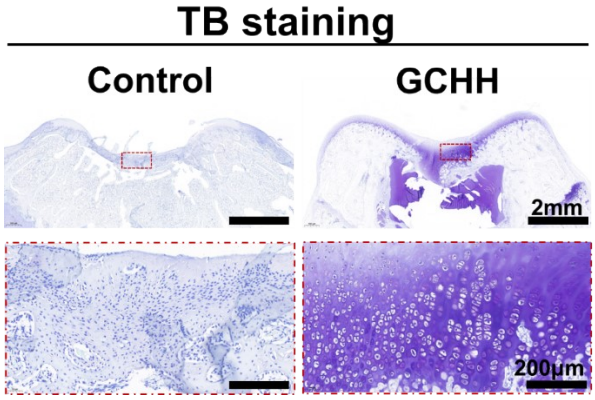

Fig. S3 Toluidine blue staining of regenerated tissue at week 8.

Table S1. The sequences of the specific primers.

Gene	Premier（5'-3')
GAPDH	FORWARD：TCGGAGTGAACGGATTTGGC
	REVERSE：TTCCCGTTCTCAGCCTTGAC
COL-1	FORWARD：CACGGACTTTGGAGATTTGTTT
	REVERSE：CCACTCGGGTCTTCAAGCA
SOX9	FORWARD：ACCTCAAGAAGGAGAGCGAAG
	REVERSE：GACCAGCGTCCAGTCGTAG
OPN	FORWARD：CACCATGAGAATCGCCGTGA
	REVERSE：ATCAGCGTGTTTAACCGGGA

Table S2. International Cartilage Repair Society (ICRS) cartilage repair assessment tool.

	Criteria	Points
Degree of defect repair	Level with surrounding cartilage	4
	75% repair of defect depth	3
	50% repair of defect depth	2
	25% repair of defect depth	1
	0% repair of defect depth	0
Integration to border zone	Complete integration with surounding cartilage	4
	Demarcating border <1mm	3
	3/4 of graft integrated,1/4 with a notable border >1mm width	2
	1/2 of graft integrated with surrounding cartilage ,1/2 with a notable border >1mm	1
	From no contact to 1/4 of graft integrated with surrounding cartilage	0
Macroscopic appearance	Intact smooth surface	4
	Fibrillated surface	3
	Small, scattered fissure or cracks	2
	Several, small or few but large fissures	1
	Total degeneration of grafted area	0
Overall score	Grade Ⅰ normal	12
	Grade Ⅱ nearly normal	11-8
	Grade Ⅲ abnormal	7-4
	Grade Ⅳ severely abnormal	3-1