

## Supporting Information

# Injectable, Self-Healing and pH Responsive Stem Cell Factor Loaded Collagen Hydrogel as Dynamic Bioadhesive Dressing for Diabetic Wound Repair

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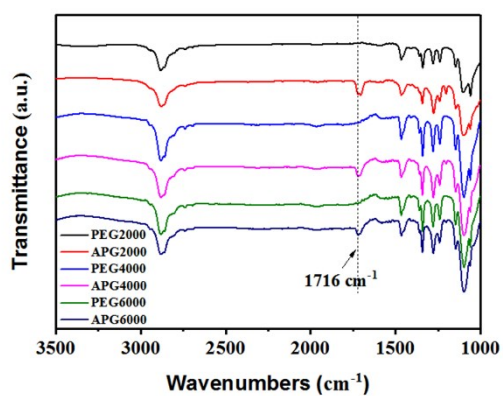


Figure S1 FT-IR images of APG with different molecular weight.

$$\%_{\text{benzaldehyde}} = \frac{2 \times S_a}{S_d} \times 100\%$$

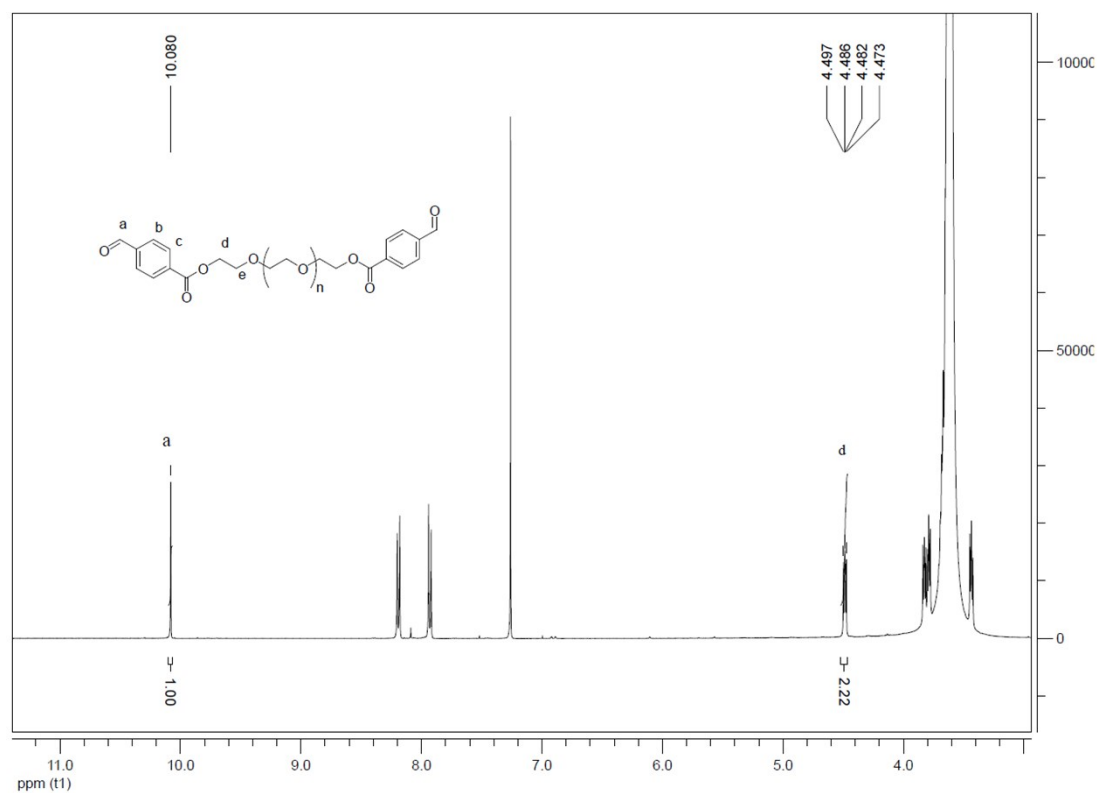


Figure S2  $^1\text{H-NMR}$  results of APG with different molecular weight.

Table S1. The dosage ratio of collagen and APG used to prepare hydrogels (the total volume was 1 mL)

Sample	Collagen	APG2K	APG4K	APG6K	-NH <sub>2</sub> / -CHO
2%Col	2%	-			-
3%Col	3%	-			-
4%Col	4%	-			-
2%Col-APG2K	2%	2.9%			0.4
		1.0%			1.2
		0.3%			3.5
3%Col-APG2K	3%	4.3%			0.4
		1.4%			1.2
		0.5%			3.5
4%Col-APG2K	4%	5.7%			0.4
		1.9%			1.2
		0.7%			3.5
2%Col-APG4K	2%		4.8%		0.4
			2.4%		1.2
			0.5%		3.5
3%Col-APG4K	3%		7.2%		0.4
			2.4%		1.2
			0.8%		3.5
4%Col-APG4K	4%		9.6%		0.4
			3.2%		1.2
			1.1%		3.5
2%Col-APG6K	2%			10.6%	0.4
				3.2%	1.2
				1.2%	3.5
3%Col-APG6K	3%			15.9%	0.4
				5.3%	1.2
				1.8%	3.5
4%Col-APG6K	4%			21.2%	0.4
				7.0%	1.2
				2.4%	3.5

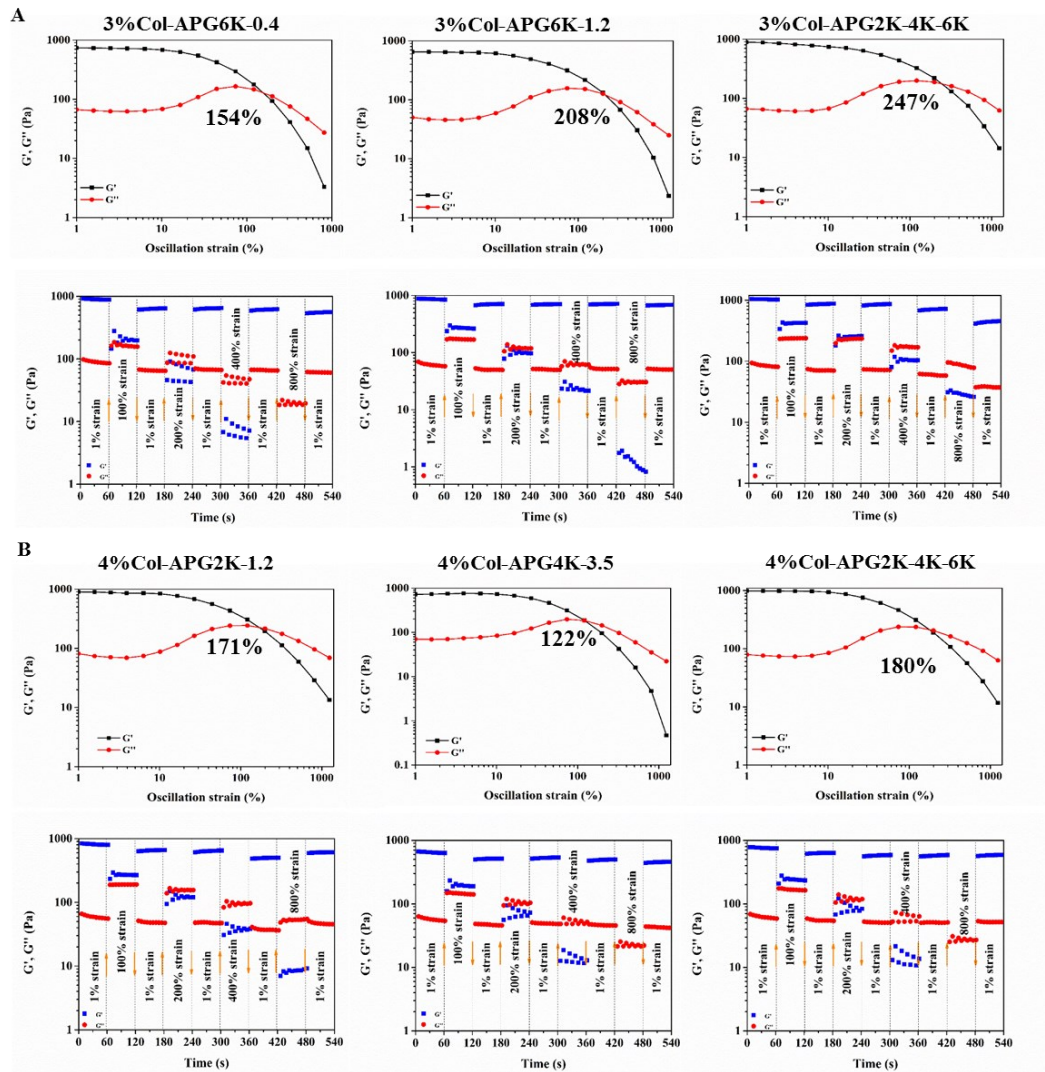


Figure S3. Critical strain and alternating stress scanning tests of collagen-APG hydrogels containing (A) 3% and (B) 4% of collagen.

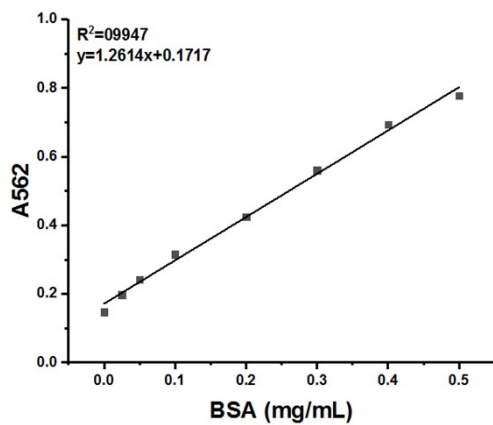


Figure S4 Calibration curve of absorbance at 562 nm vs concentration of BSA.