

Supporting Information for

**Asiaticoside-laden Silk Nanofiber Hydrogels to Regulate Inflammation
and Angiogenesis for Scarless Skin Regeneration**

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Table S1. AC loading efficiency (LE%), loading capacity (LC%) and Zeta potential
(AC and silk nanofiber at ratio 1:1, Silk nanofiber concentration 2 wt%)

AC concentration in methanol (mg/ml)	Loading efficiency (LE%)	Loading capacity (LC%)	Zeta potential (mV)
1	65.77±0.25	3.28±0.02	39.50±2.13
2	70.77±1.01	7.08±0.10	37.93±0.38
4	69.67±1.46	13.93±0.29	36.74±0.38

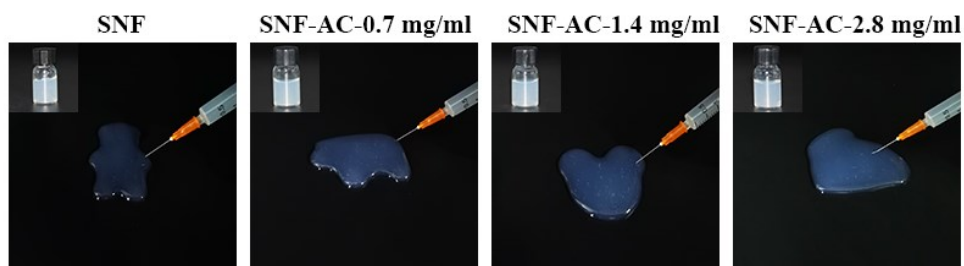


Figure S1. Injectable behavior of silk nanofiber hydrogels and AC-laden silk nanofiber hydrogels. SNF, silk nanofiber hydrogels; SNF-AC-0.7 mg/ml, AC-laden silk nanofiber hydrogel with AC 0.7 mg/ml; SNF-AC-1.4 mg/ml, AC-laden silk nanofiber hydrogel with AC 1.4 mg/ml; SNF-AC-2.8 mg/ml, AC-laden silk nanofiber hydrogel with AC 2.8 mg/ml.

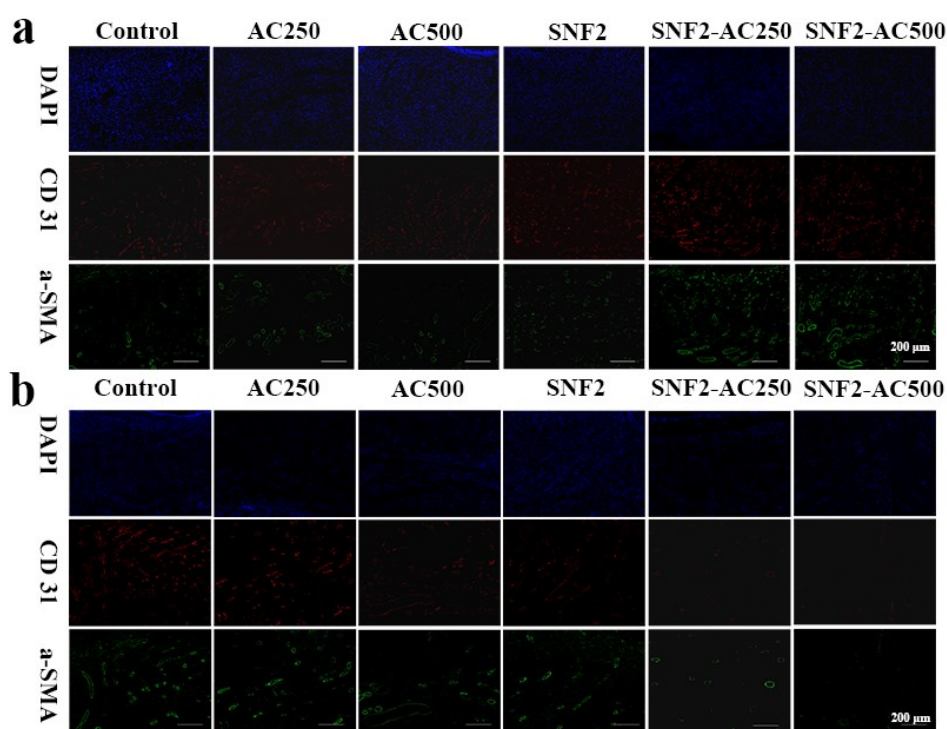


Figure S2. Angiogenesis at wound sites at days 7 and 21 after the surgery: (a) Representative immunofluorescence images of DAPI (blue), CD31 (red) and α -SMA (green) stained tissue samples collected from the wounds at day 7. The scale bars were 200 μ m; (b) Representative immunofluorescence images of DAPI (blue), CD31 (red) and α -SMA (green) stained tissue samples collected from the wounds at day 21. The scale bars were 200 μ m; Control, 0.9 % NaCl solution, SNF2, 2 wt% of silk nanofiber hydrogels; AC250, AC solution with concentration of 250 μ g/ml; AC500, AC solution with concentration of 500 μ g/ml; SNF2-AC250, AC-laden silk nanofiber hydrogel (2 wt%) with AC concentration of 250 μ g/ml; SNF2-AC500, AC-laden silk nanofiber hydrogel (2 wt%) with AC concentration of 500 μ g/ml.

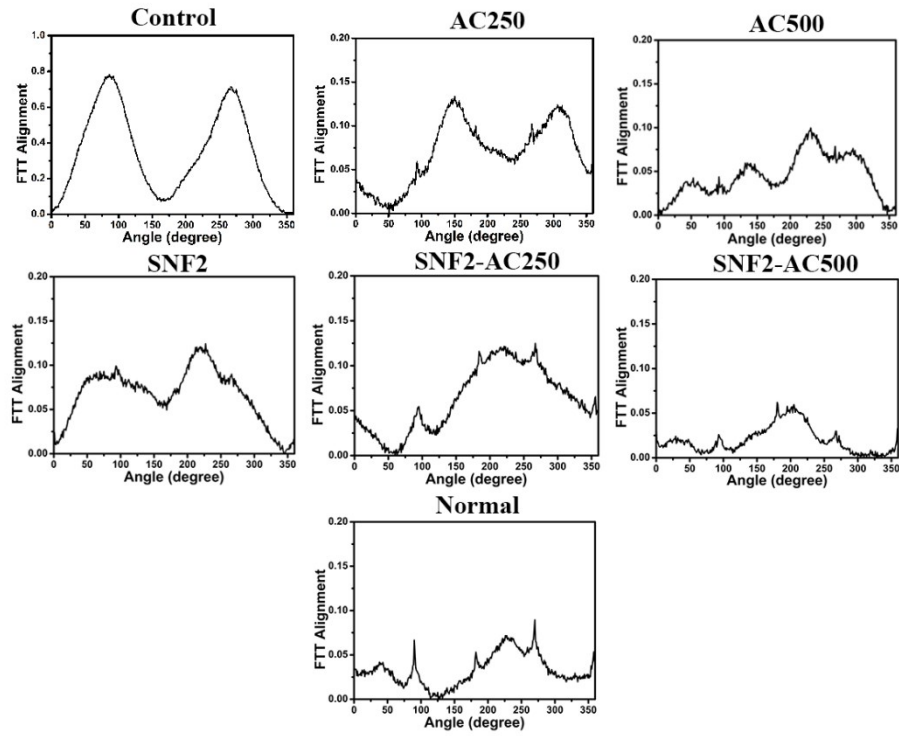


Figure S3. Analysis of collagen orientation degree of picrosirius red stained images at 21 day. Control, 0.9 % NaCl solution, SNF2, 2 wt% of silk nanofiber hydrogels; AC250, AC solution with concentration of 250 $\mu\text{g/ml}$; AC500, AC solution with concentration of 500 $\mu\text{g/ml}$; SNF2-AC250, AC-laden silk nanofiber hydrogel (2 wt%) with AC concentration of 250 $\mu\text{g/ml}$; SNF2-AC500, AC-laden silk nanofiber hydrogel (2 wt%) with AC concentration of 500 $\mu\text{g/ml}$.