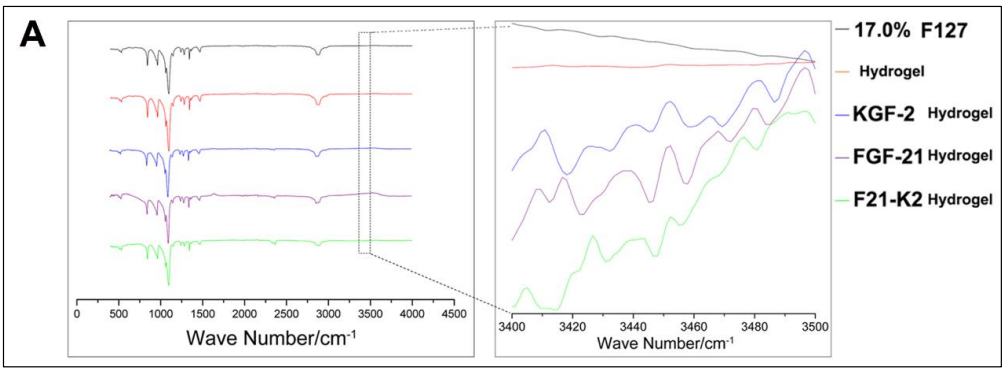
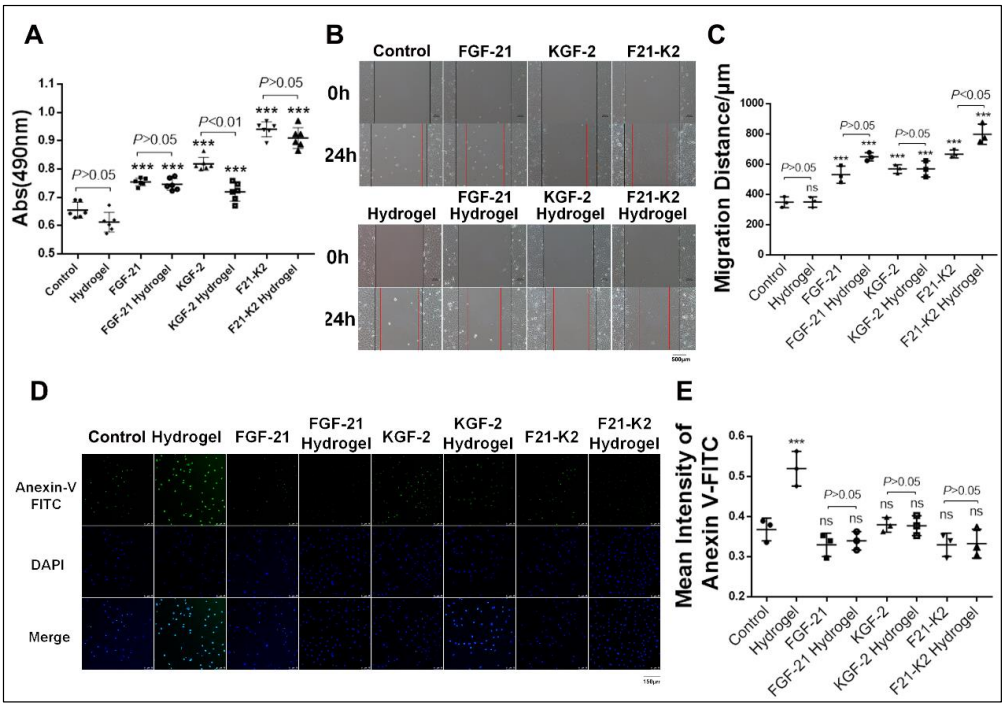
Supplementary Fig. 1.



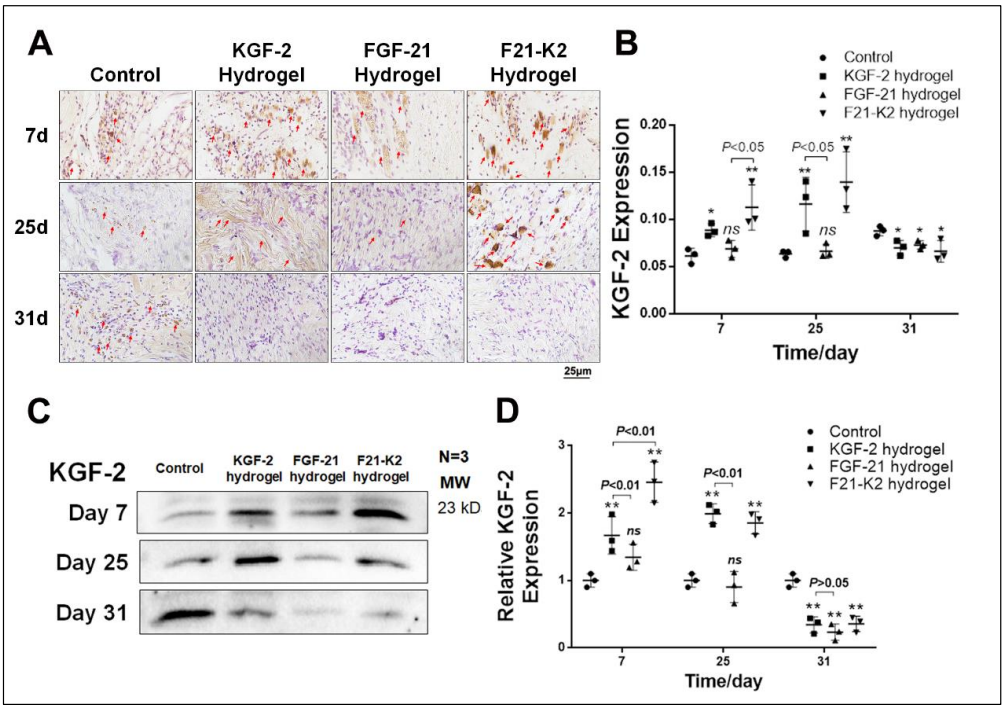
Supplementary Fig. 1. (A) Infrared scanning spectra of thermosensitive hydrogel. The highest intensities in the poloxamer 407 hydrogel group were observed at 1100 cm^{-1} and 2850-2880 cm^{-1}, corresponding to the C-O-C and C–H stretch of CH_2/CH_3. The highest intensities of the KGF-2 and FGF-21 loaded hydrogels were observed at 3400 to 3500 cm^{-1}, corresponding to the N-H stretch of acid amide,

Supplementary Figure 2.



Supplementary Figure 2. Activity and toxicology of FGF-21 and KGF-2 loaded thermosensitive hydrogel in vitro. (A) MTT experimental activity results statistics. (B) Scratch photographs (magnification is 100 folds, scale bar: 500 μm). (C) Cell migration distance statistics (n=3). (D) Annexin-V apoptosis fluorescence photographs, 24h (magnification is 100 folds, scale bar: 500μm). (E) Annexin-V average fluorescence intensity statistics (n=3). Compared with control group, *** P<0.001; ns, P>0.05.

Supplementary Figure 3.



Supplementary Fig.3 Expression of KGF-2 protein measured with immunohistochemistry and Western Blot. (A) Immunostaining of KGF-2 in dermis on days 7, 25 and 31 (red arrow indicates expression of KGF-2, bar: 25 μm). (B) Statistical analysis of KGF-2 expression measured with immunohistochemistry in dermis (n=3). (C) Western Blot of KGF-2 in skin section of rats on days 7, 25 and 31. (D) Statistical analysis of KGF-2 expression measured with Western Blot (n=3). Compared with control group, * P<0.01, ** P<0.01, ns, P>0.05.