Electronic Supplementary Material (ESI) for Journal of Materials Chemistry B.

Supporting Information

Injectable bioactive akermanite/alginate composite hydrogels for in situ skin tissue engineering

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Figures S and figure S captions

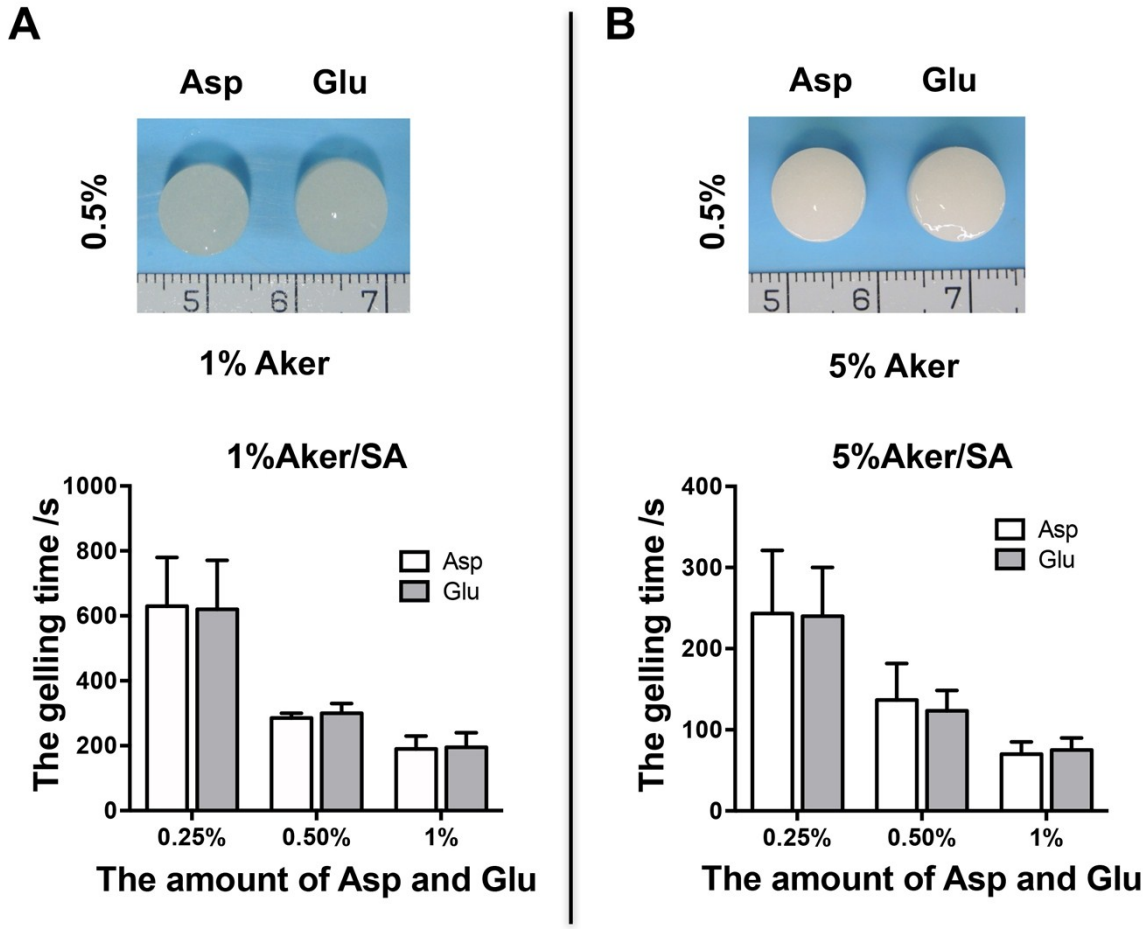

Figure S1. Gelling time. A) Gelling time of 1%Aker/SA composite hydrogels with different amount of Asp and Glu. B) Gelling time of 5%Aker/SA composite hydrogels with different amount of Asp and Glu.

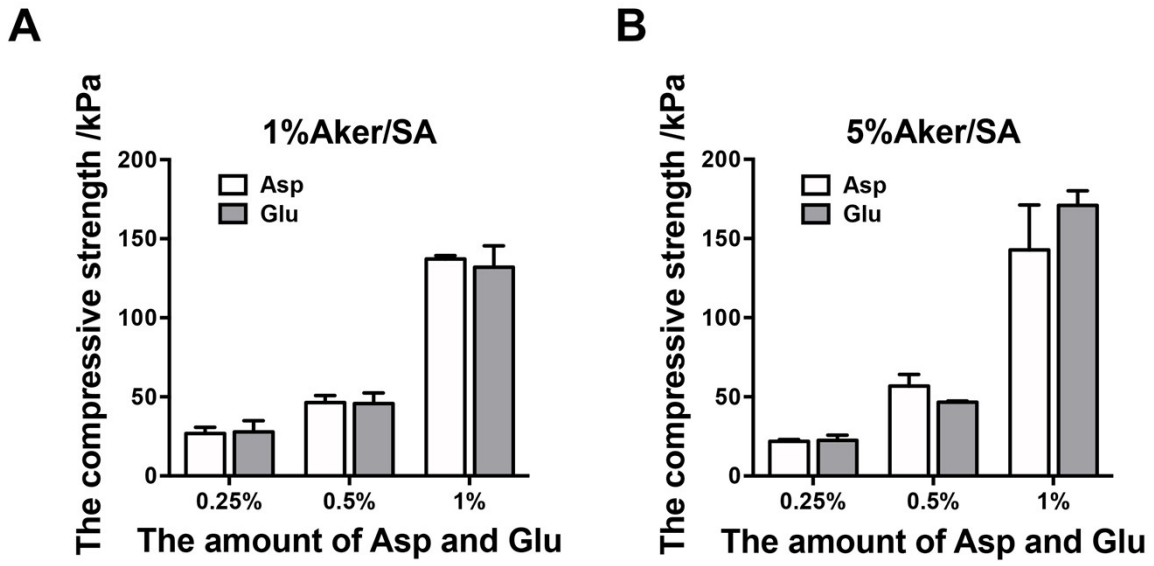

Figure S2. Compressive strength. A) Compressive strength of 1%Aker/SA composite hydrogels with different amount of Asp and Glu. B) Compressive strength of 5%Aker/SA composite hydrogels with different amount of Asp and Glu.

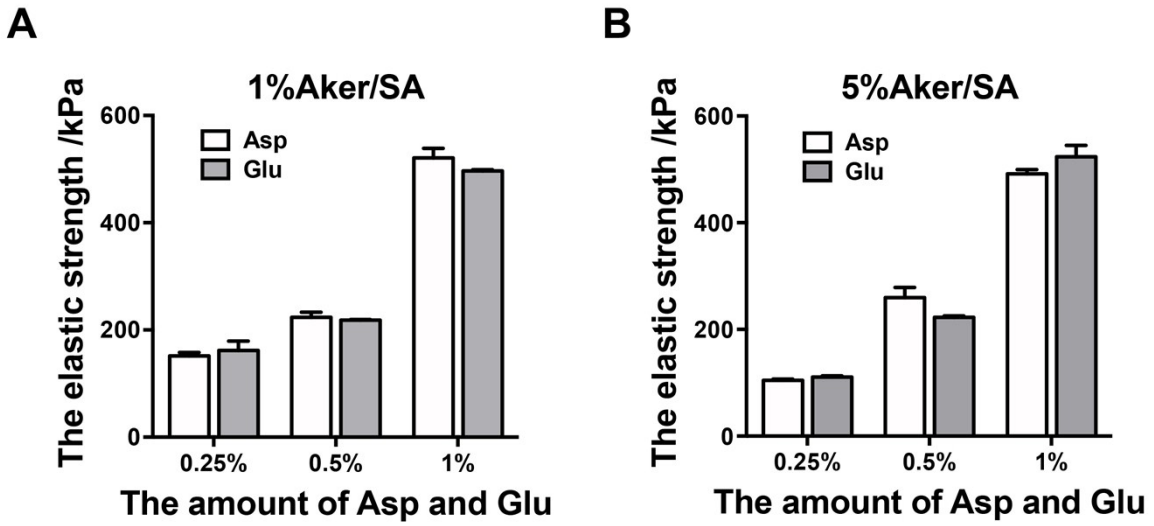

Figure S3. Elastic strength. A) Elastic strength of 1%Aker/SA composite hydrogels with different amount of Asp and Glu. B) Elastic strength of 5%Aker/SA composite hydrogels with different amount of Asp and Glu.

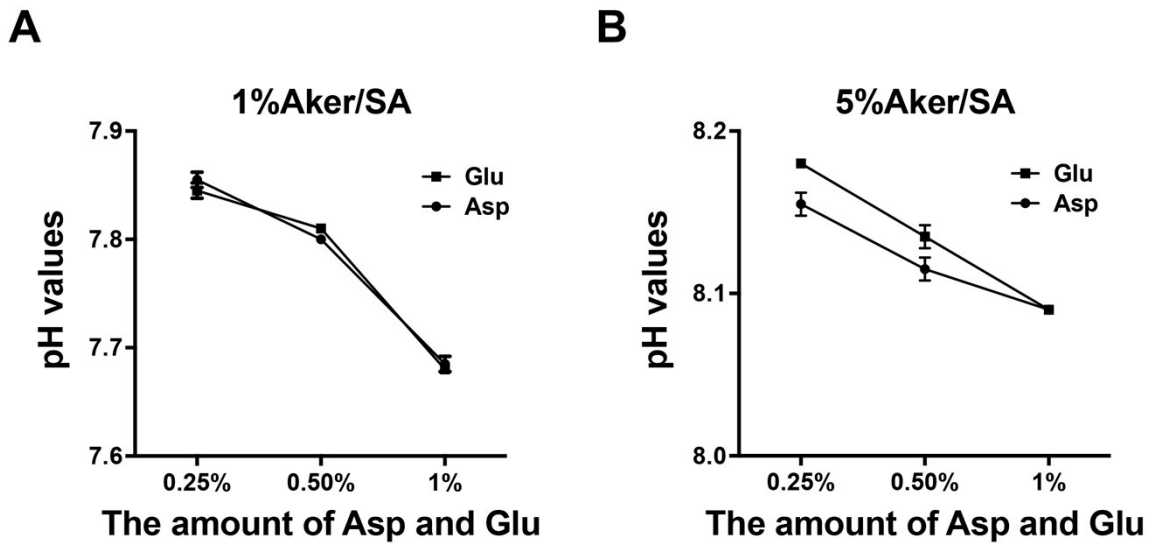

Figure S4. The pH values of Aker/SA comp osite hydrogels with different amount of Asp and Glu in SBF. A) 1%Aker/SA; B) 5%Aker/SA.

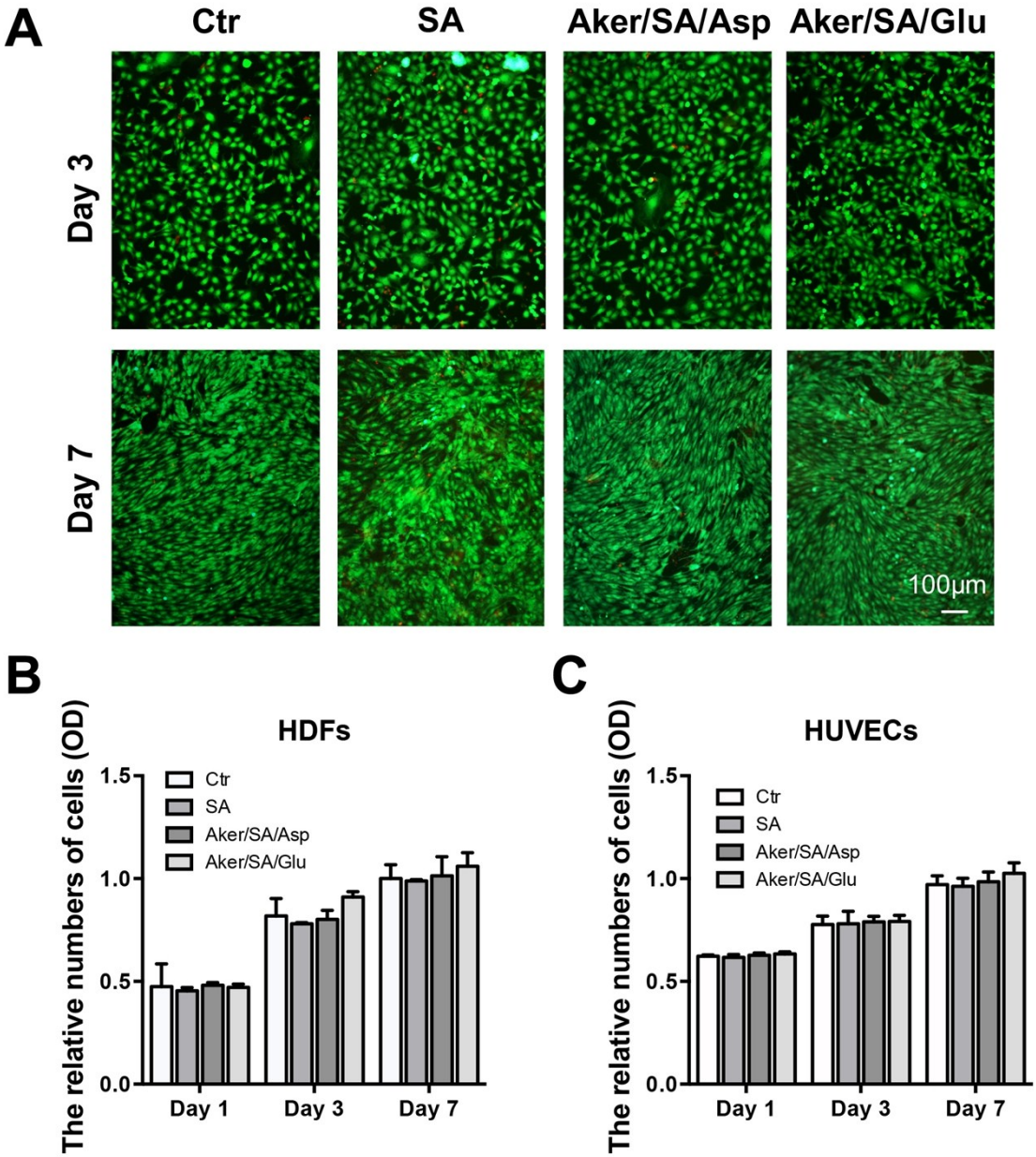

Figure S5. Optical photomicrograph of HUVECs cultured with Aker/SA and pure SA hydrogels for 3 and 7 days after Live-Dead staining. B) and C) CCK-8 assay for HUVECs and HDFs cultured with hydrogels, respectively.

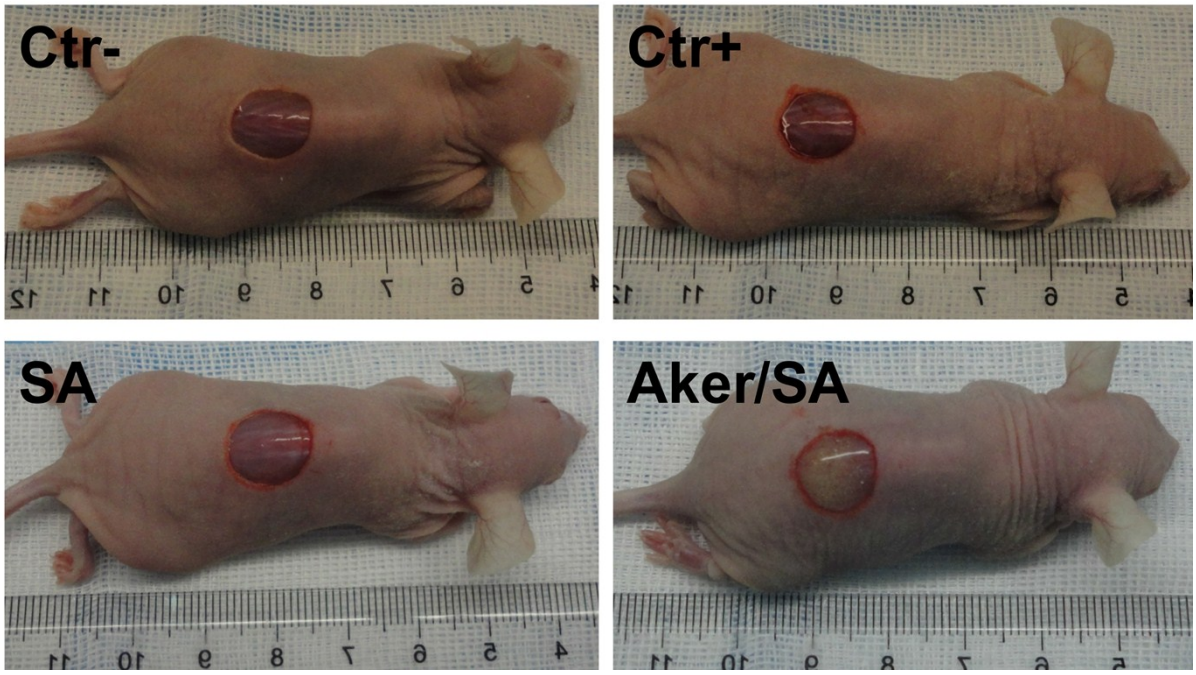

Figure S6. Macroscopic images of full skin wound at the back with the diameter of 10 mm after hydrogel transplantation clearly showing hydrogel covering the wound and the wound margins.

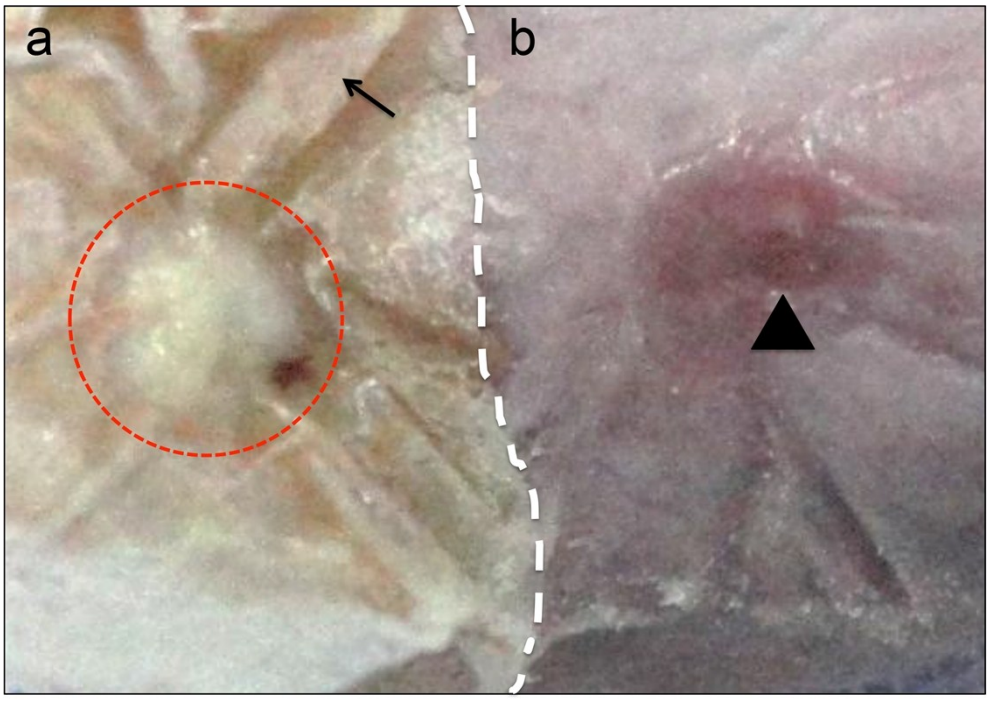

Figure S7. Macroscopic image shows the automatic detachment of the Aker/SA composite hydrogel dressing from the wound site and the complete neoepidermis formation. (a) The detached dressing from the wound. Arrow, Tegaterm™ Film; Red circle, the composite

hydrogel. (b) The new skin regeneration under the composite hydrogel dressing. Triangle, the neoepidermis.