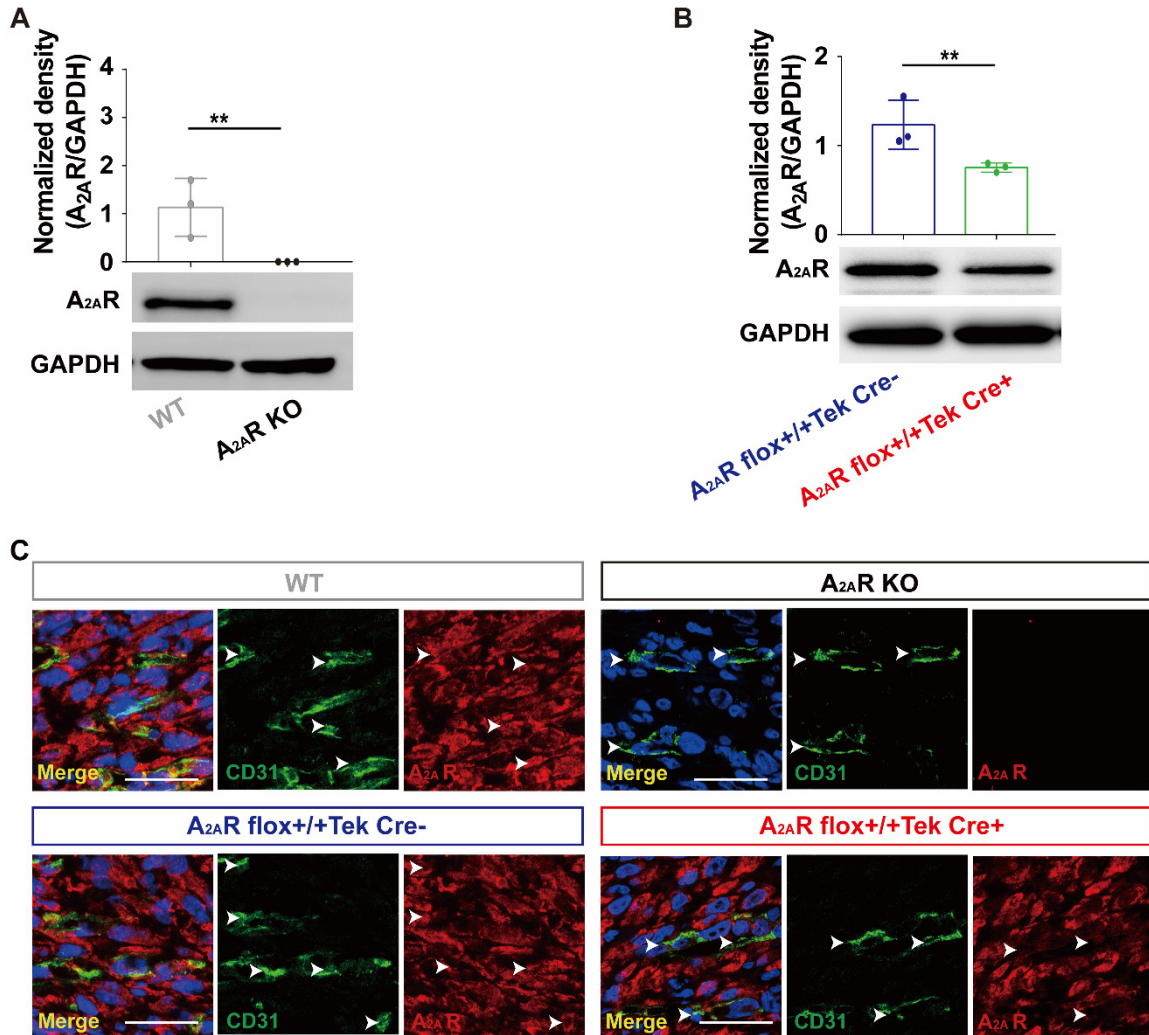


## Supplemental fig. 1

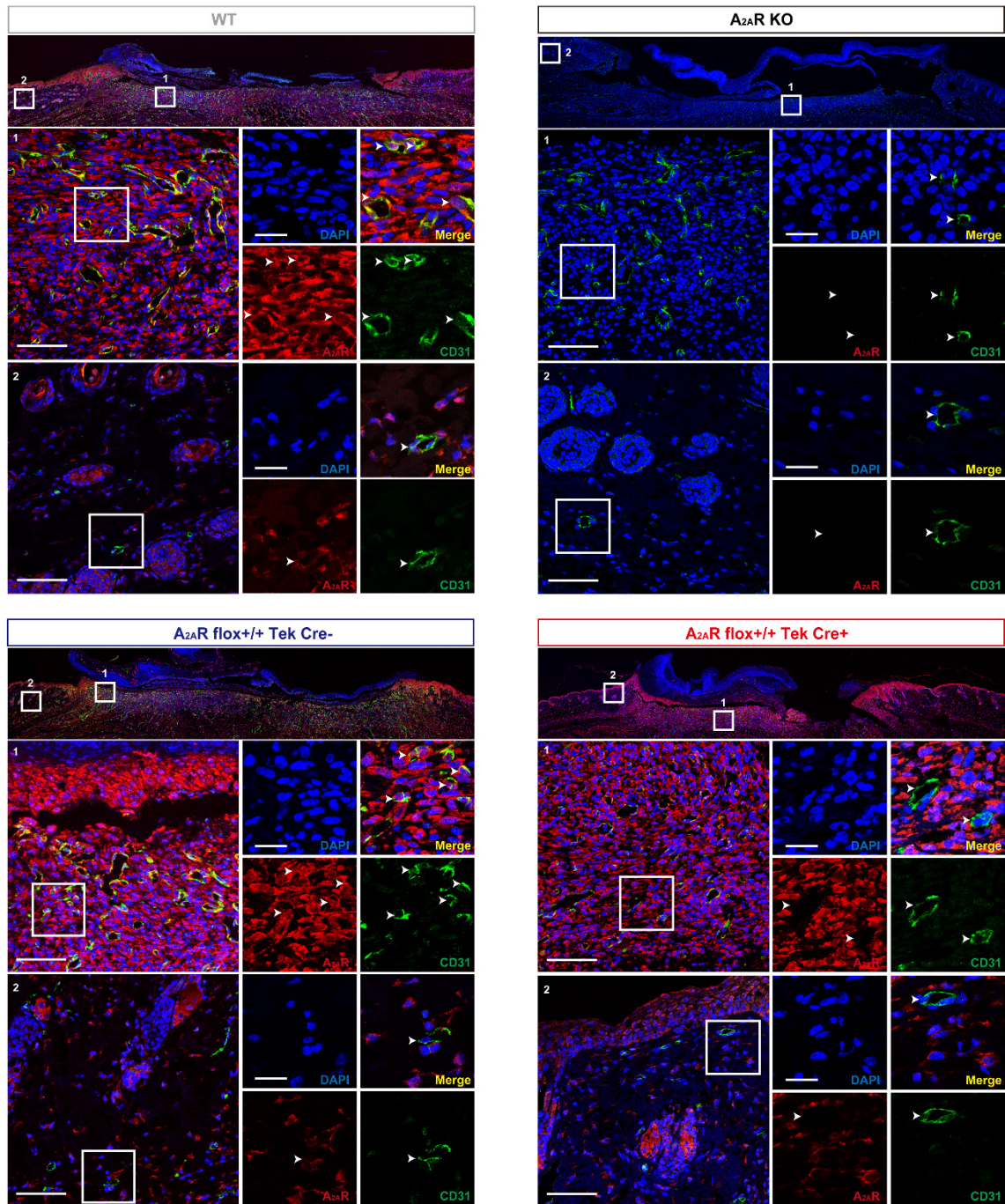


**Figure S1. The expression of A<sub>2A</sub>R in A<sub>2A</sub>R KO and EC-A<sub>2A</sub>R KO mice.**

Western blot analysis of A<sub>2A</sub>R protein expression in full-thickness skin in A<sub>2A</sub>R KO (A) and EC-A<sub>2A</sub>R KO mice (B). \*\* $p < 0.01$  (n=3). (C) Double-label immunofluorescence for A<sub>2A</sub>R (red) and CD31 (green) in the granulation tissue of the wound at 9 days post-wounding revealed the expression of A<sub>2A</sub>R in CD31-positive cells and nonpositive cells.

Scale bar, 50  $\mu$ m.

Supplemental fig. 2

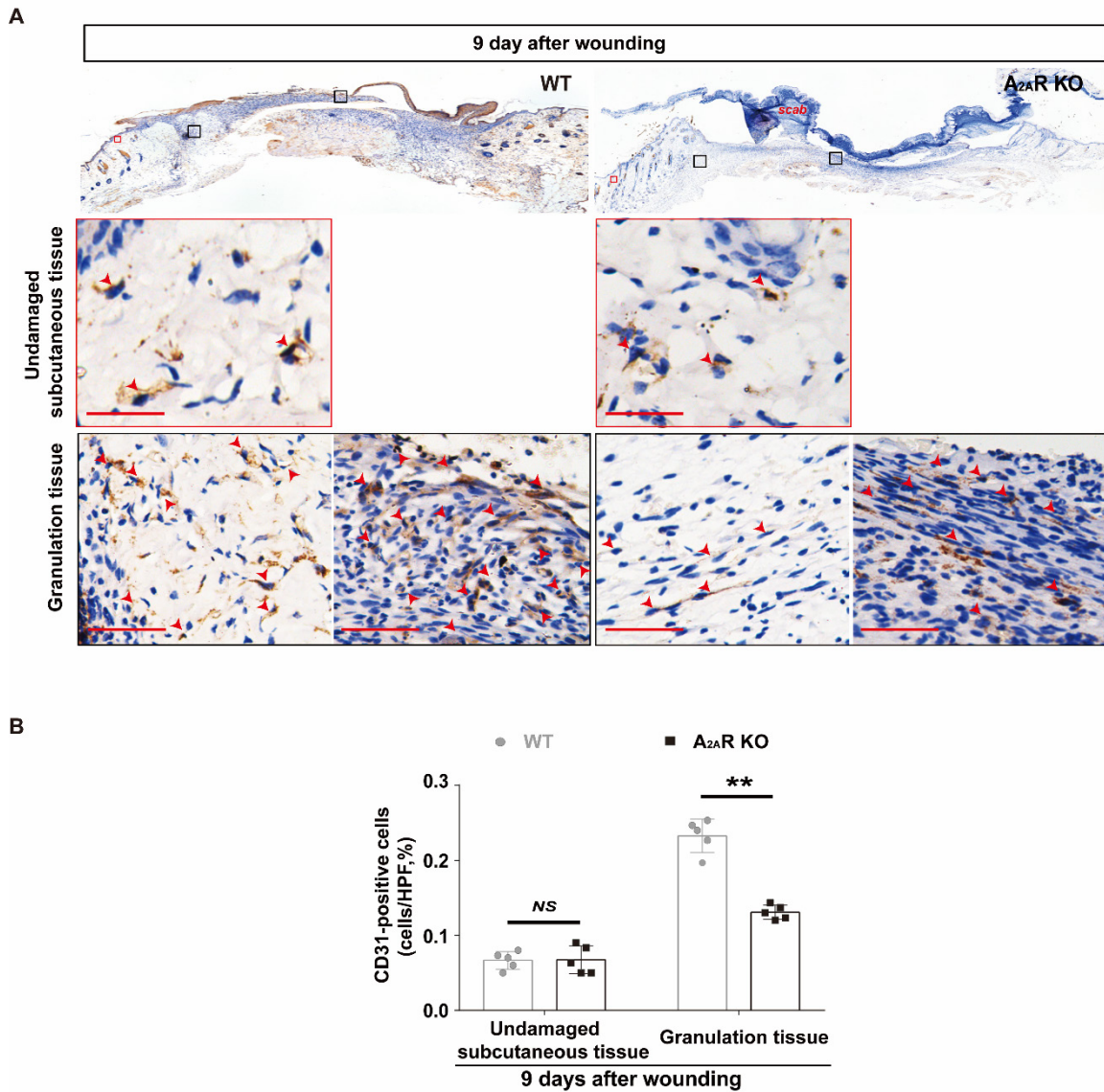


**Figure S2. The expression and colocalization of A<sub>2A</sub>R and CD31 in A<sub>2A</sub>R KO and EC-A<sub>2A</sub>R KO mice after full-thickness wounding.**

Double-label immunofluorescence for A<sub>2A</sub>R (red) and CD31 (green) in undamaged subcutaneous tissue and the granulation tissue of the wound at 9 days post-wounding revealed the colocalization of A<sub>2A</sub>R and CD31 (white arrow). Short scale bar, 100 μm; Long scale bar, 50 μm.



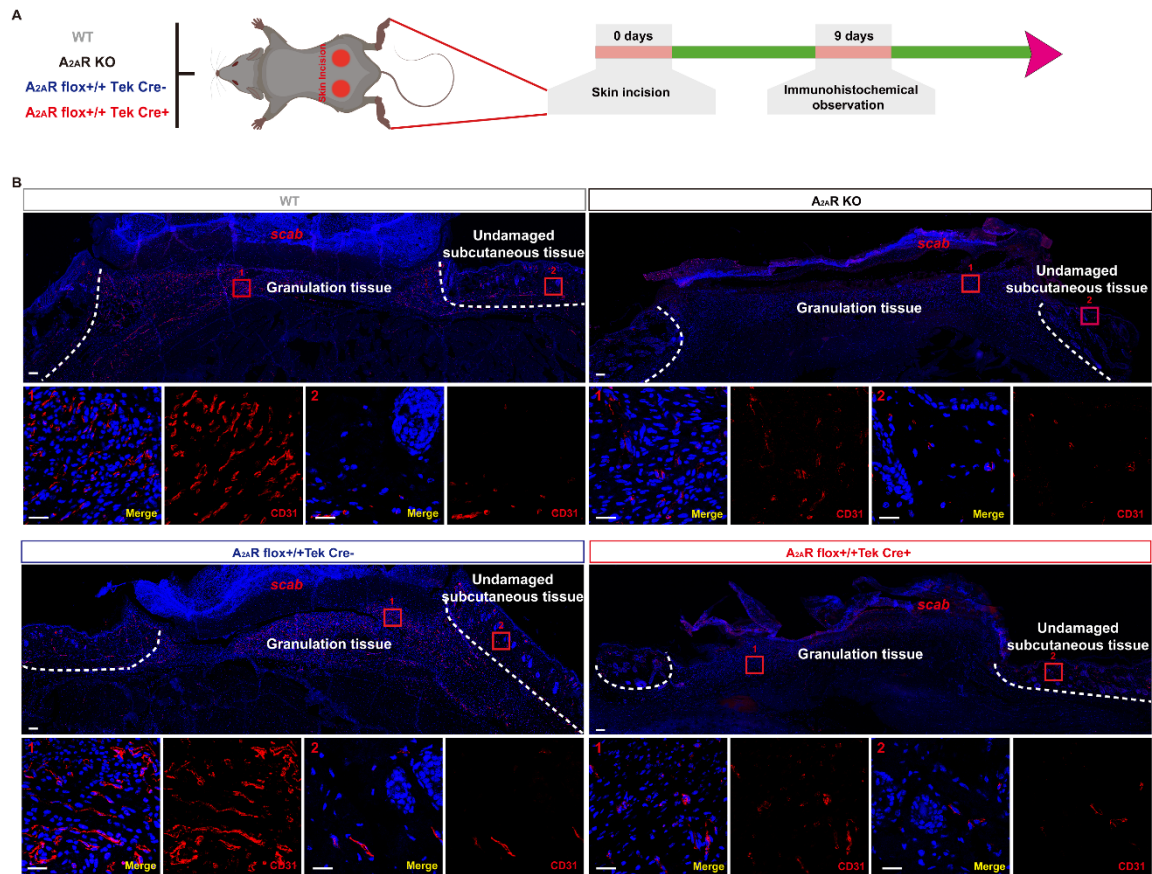
### Supplemental fig. 3



**Figure S3. Changes in angiogenesis in *A<sub>2A</sub>R* KO mice after full-thickness wounding.**

(A) Immunohistochemistry for CD31 (red arrow) in *A<sub>2A</sub>R* KO mice at 9 days post-wounding. Scale bar, 50  $\mu$ m. (B) Quantitative analysis of CD31-positive cells in each group. \*\* $p < 0.01$  ( $n = 5$ ); NS, not significant.

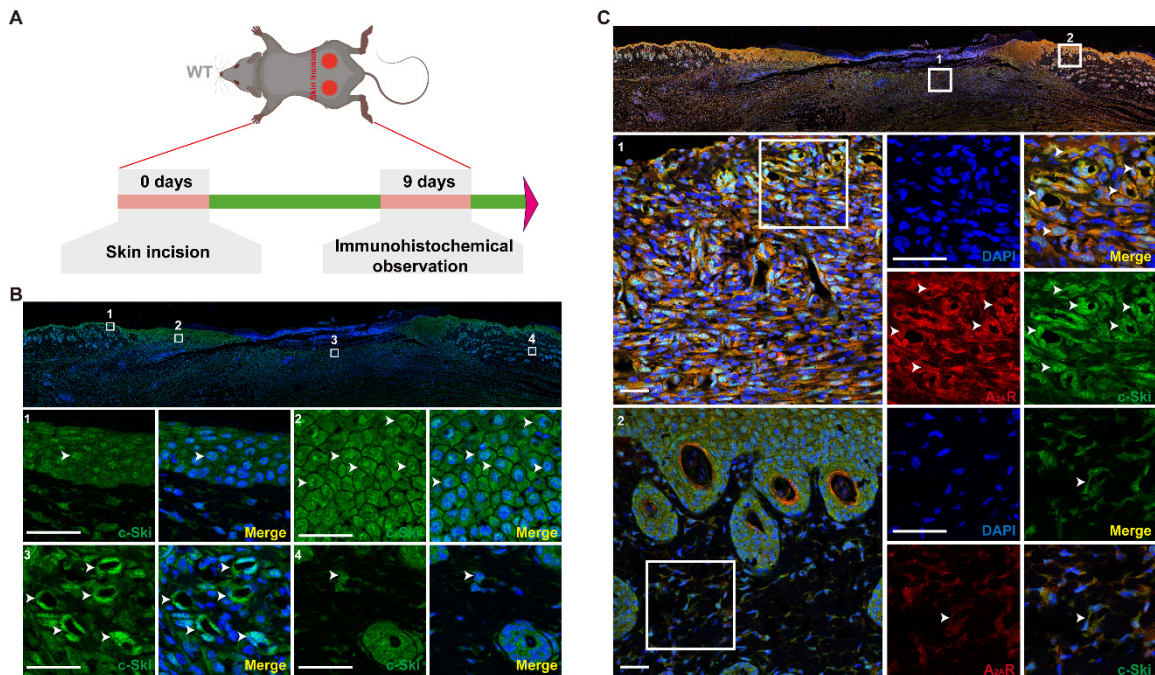
Supplemental fig. 4



**Figure S4. Changes in angiogenesis in A<sub>2A</sub>R KO and EC-A<sub>2A</sub>R KO mice after full-thickness wounding.**

(A) Experimental procedure. (B) Immunohistochemistry for CD31 (red arrow) in A<sub>2A</sub>R KO and EC-A<sub>2A</sub>R KO mice at 9 days post-wounding. The lower images are higher magnification sections of the red squares in the upper images. Short scale bar, 200  $\mu$ m; Long scale bar, 50  $\mu$ m.

Supplemental fig. 5



**Figure S5. Colocalization of c-Ski and  $A_{2A}R$  in the granulation tissue of WT mice after full-thickness wounding.**

(A) Experimental procedure. (B) The expression of c-Ski (green, white arrow) in the epithelium, neopithelium, undamaged subcutaneous tissue and granulation tissue at 9 days post-wounding in WT mice. Short scale bar, 50  $\mu\text{m}$ ; Long scale bar, 50  $\mu\text{m}$ . (C) Double-label immunofluorescence for c-Ski (green) and  $A_{2A}R$  (red) in undamaged subcutaneous tissue and the granulation tissue of the wound at 9 days post-wounding revealed the colocalization of c-Ski and  $A_{2A}R$  (white arrow). Short scale bar, 50  $\mu\text{m}$ ; Long scale bar, 50  $\mu\text{m}$ .



Supplemental fig. 6

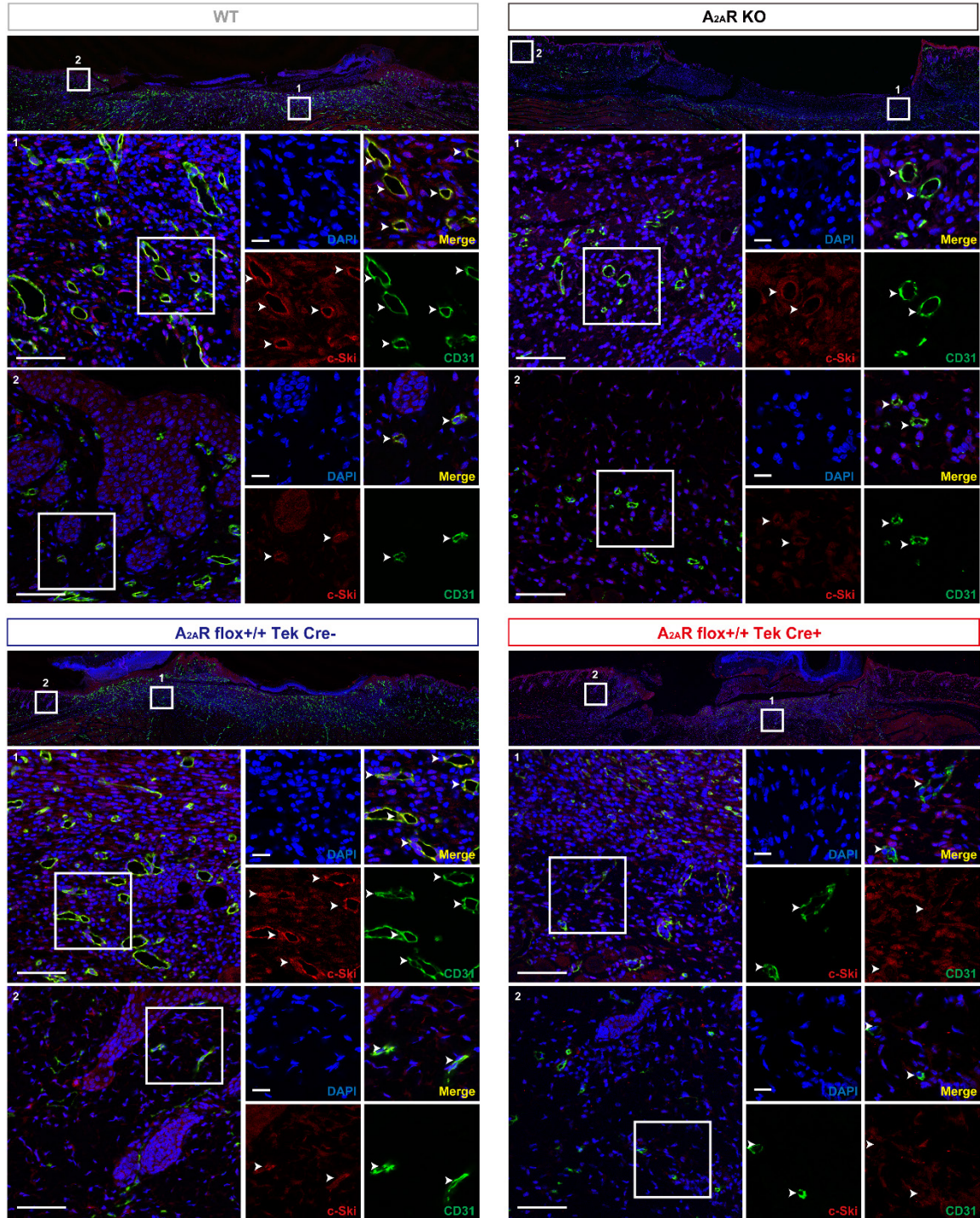
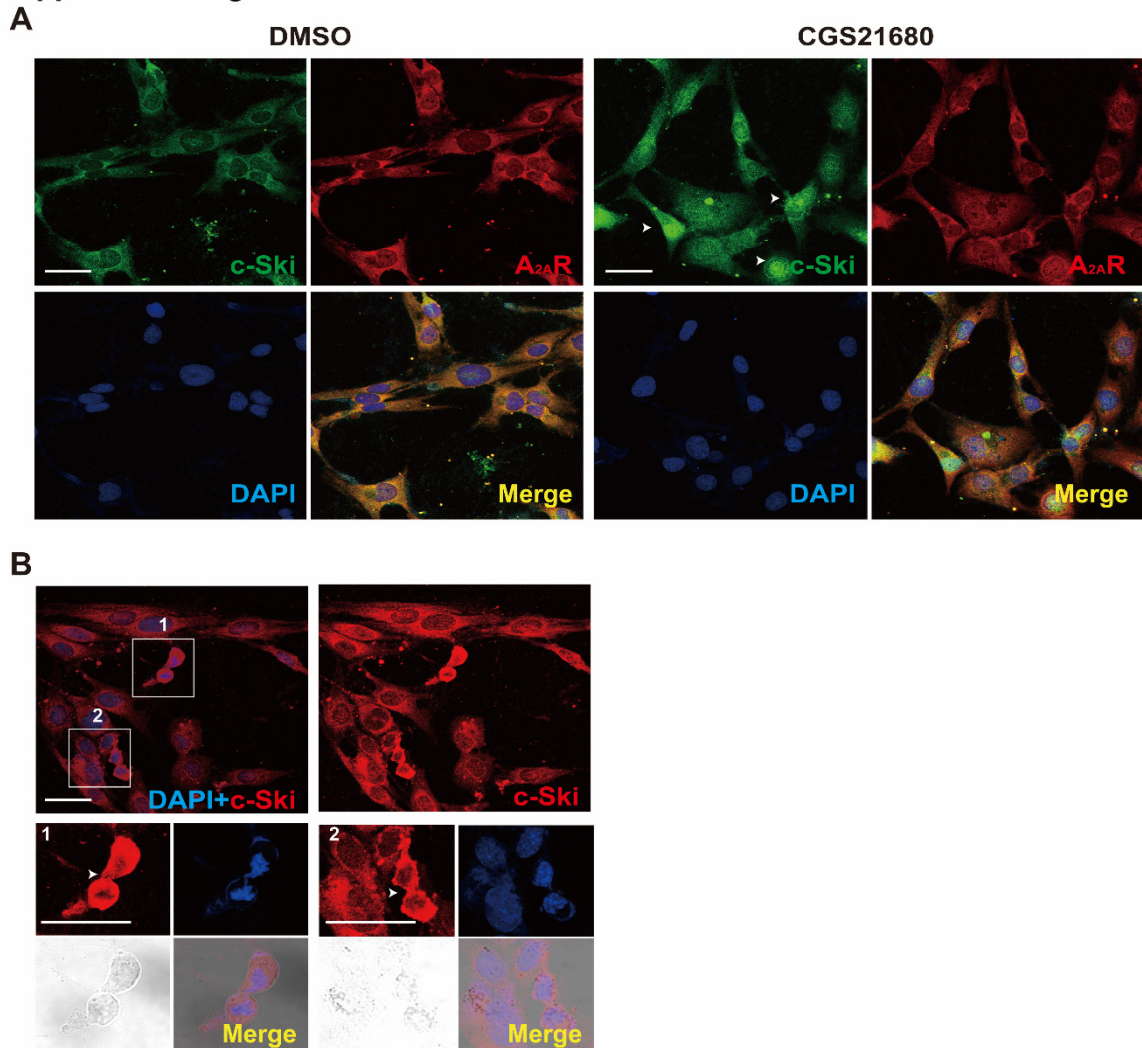


Figure S6. The expression and colocalization of c-Ski and CD31 in A<sub>2A</sub>R KO and EC-A<sub>2A</sub>R KO mice after full-thickness wounding.

Double-label immunofluorescence for c-Ski (red) and CD31 (green) in the undamaged subcutaneous tissue and the granulation tissue of the wound at 9 days post-wounding revealed the colocalization of c-Ski and CD31 (white arrow). Short scale bar, 50  $\mu\text{m}$ ; Long scale bar, 50  $\mu\text{m}$ .

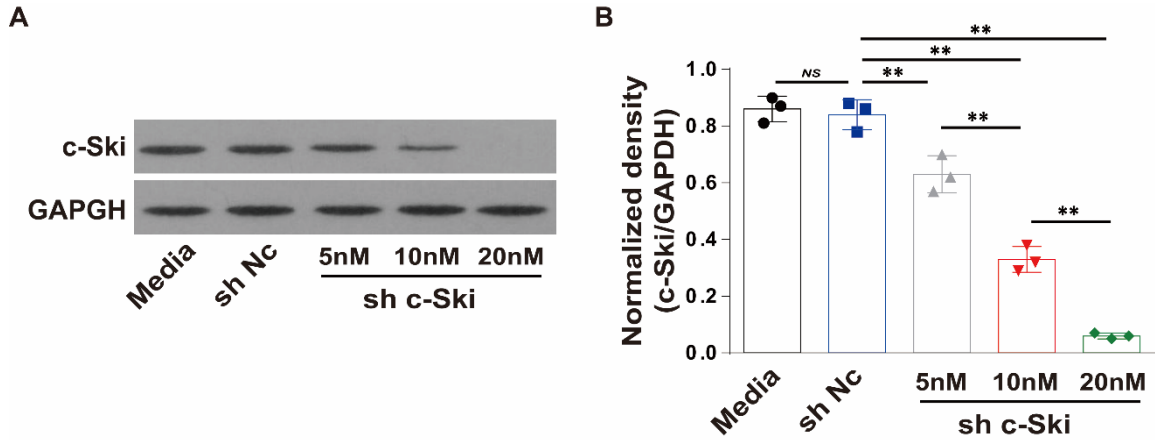


## Supplemental fig. 7

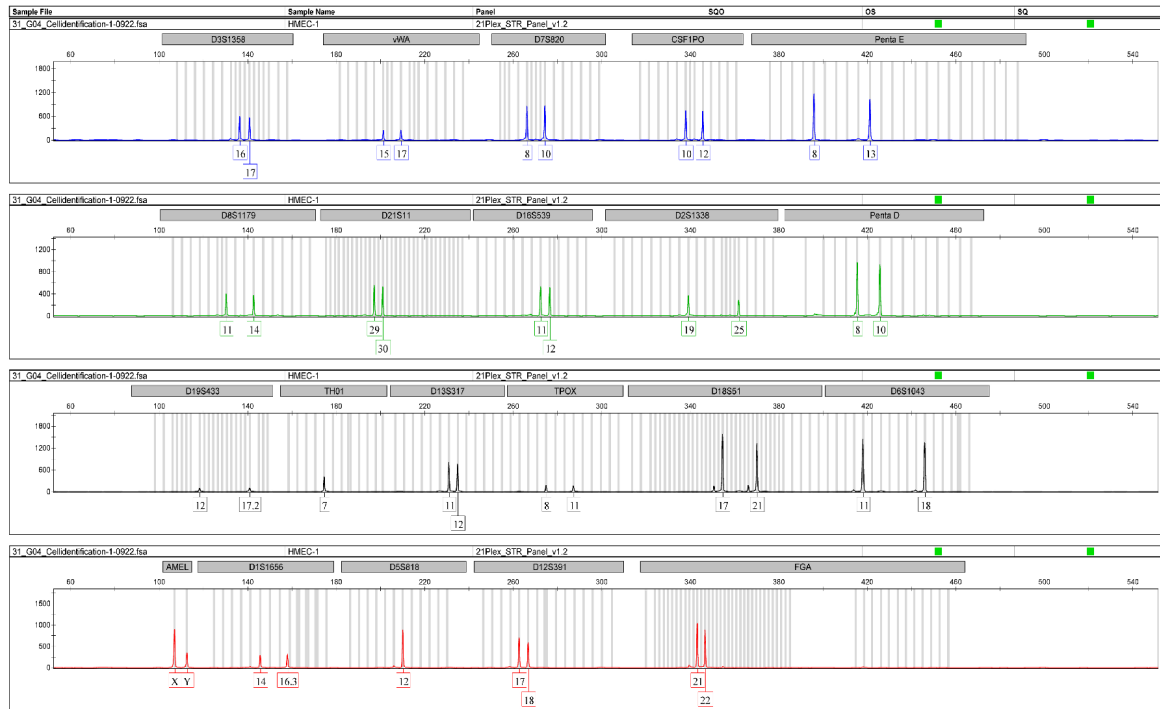


**Figure S7. Expression of c-Ski and A<sub>2A</sub>R in HMECs after CGS-21680 treatment.**

(A) Double-label immunofluorescence for c-Ski (green) and A<sub>2A</sub>R (red) in HMECs at 12 h after CGS21680 treatment revealed increasing levels of c-Ski and obvious nuclear aggregation (white arrow). Scale bar, 50  $\mu$ m. (B) The fluorescence intensity of c-Ski (red) obviously increased in dividing cells (white arrow). The lower panel shows higher magnification sections of the white squares in the upper panel. Short scale bar, 50  $\mu$ m; Long scale bar, 50  $\mu$ m.



**Figure S8:** WB analysis of c-Ski protein levels in HMEC-1 cells. HMEC-1 cells were treated with 5 nM, 10 nM, or 20 nM sh c-Ski for 24 h. Representative images (A) and western blot (B) analysis of c-Ski protein levels in U937 cells. The results were obtained from three independent experiments.  $**p < 0.01$  ( $n = 3$ ); NS, not significant.



**Figure S9: STR profiles of sample cell line**

The submitted profile is exact match for the following human cell line(s) in the DSMZ

STR database (8 core loci plus Amelogenin): HMEC-1.