

**Fig. S5.** Analysis of transdifferentiation of Wj-MSCs into keratinocyte-like cells. Expression of human pan cytokeratin was analyzed by immunohistochemistry at the migrating epithelial front of wounds from mice after 2 weeks of treatment with silk fibroin patches cellularized with Wj-MSCs plus Wj-MSCs injected at the edge of the wound. Human (E) or mouse (F) skin sections were used as positive and negative controls, respectively. Scale bar: 100  $\mu$ m (A, C, E, F) and 50  $\mu$ m (B, D).