

Figure S4. The combination of four cytokines was the minimus effective components in T cell medium, Related to Figure 3 (A) Protein array analysis was performed to detect cytokines present in activated T cell medium. 1: IFN- $\gamma$ , 2: IL-1 $\alpha$ , 3: IL-2, 4: IL-3, 5: IL-10, 6: IL-13, 7: IL-16, 8: IL-17, and 9: TNF- $\alpha$ . Unnumbered dots were either chemokines or cytokine receptors. (B) Seven cytokines were selected for further screening.

(C) Representative FACS analysis profiles of BrdU labeling for MuSCs cultured in F10, T cell, or cytokine medium. BrdU was pulse labeled for 2hrs. Wild type and T cell medium samples were the same as in Fig. 2a and Fig. S3a to allow direct comparation with cytokine medium. The experiments were all performed at the same time.

(D) Statistical analysis of the percentage of BrdU positive MuSCs in cells cultured in F10, T cell, or cytokine medium. Error bars were based on 3 independent experiments. \* indicates statistically significant, p<0.01.

(E) Phase contrast images of MuSCs cultured in medium containing a single cytokine. Scale bars, 200 µm. Arrows indicated morphologically differentiated cells.

(F) MuSC number fold increase after treated with IL-1 $\alpha$ , IL-13, IFN- $\gamma$ , or TNF- $\alpha$  alone. <sup>\*</sup> indicates statistically significant, p<0.01. (G) Quantification of ELISA analysis of the four cytokines in injured TA muscle from *Rag*?<sup>\*</sup> and wild type mice. Error bars were based on 3 independent experiments.