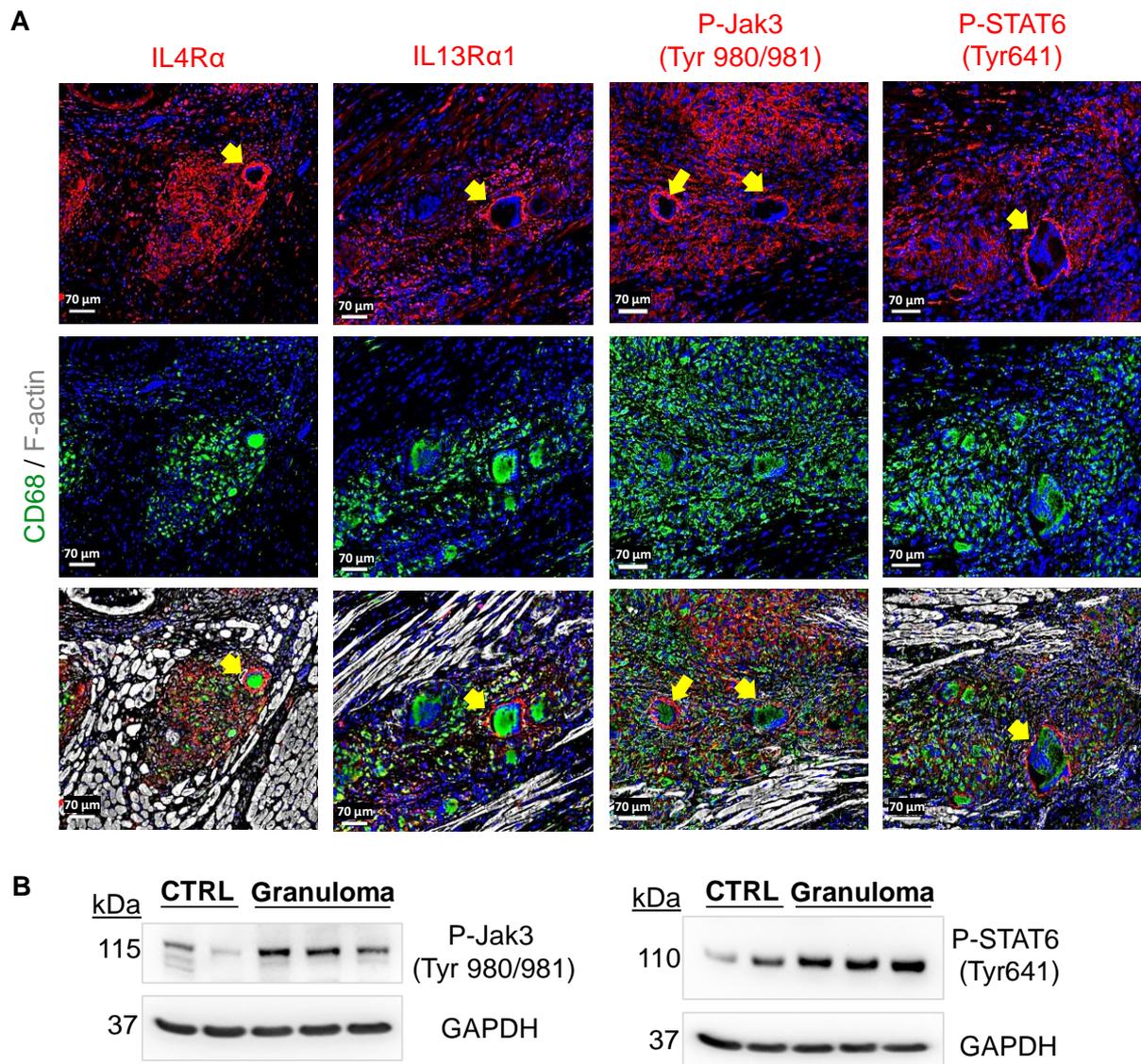
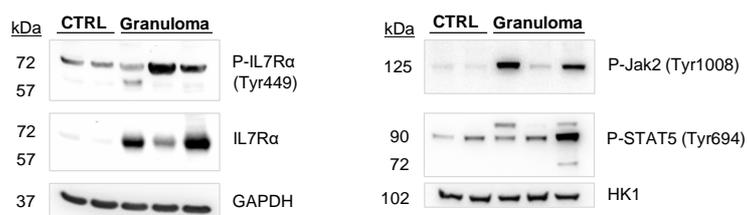


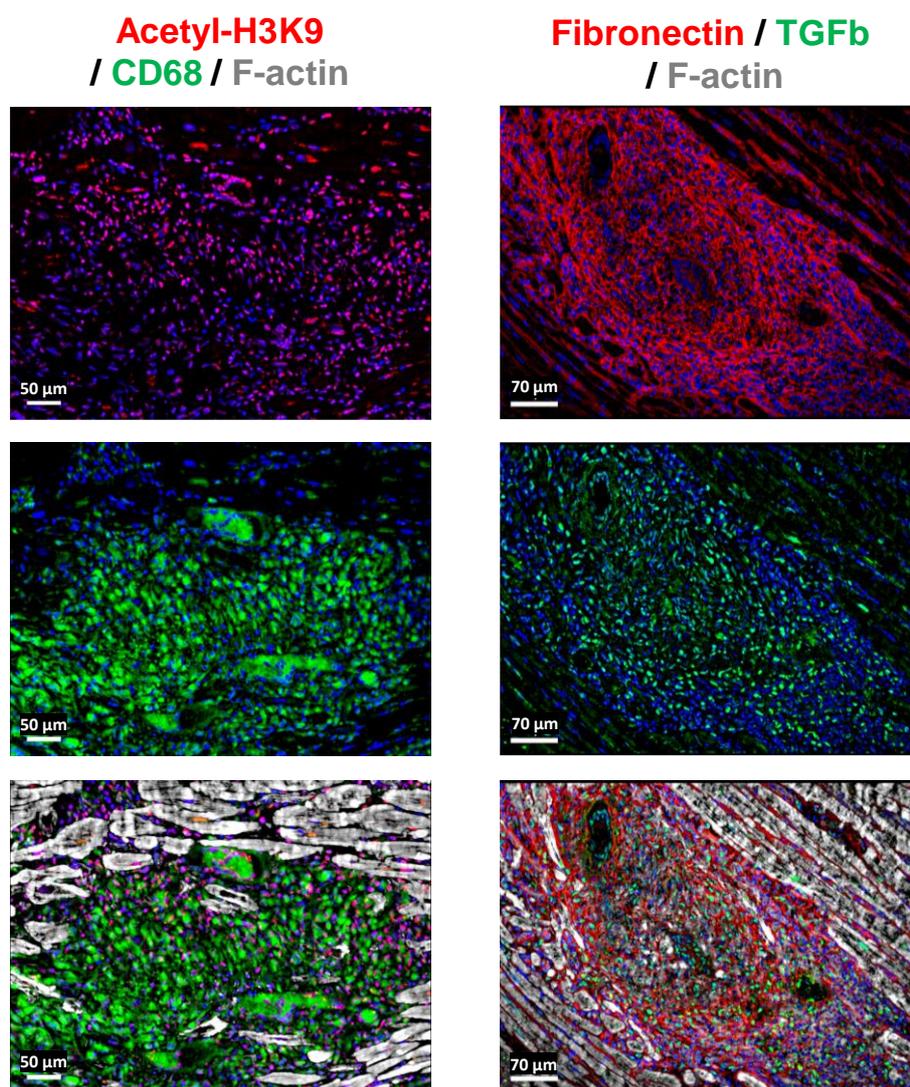
**Supplementary Figures:**



**Suppl. Figure 1: Activation of JAK3/STAT6 signaling and the spatial organization of IL4R $\alpha$  and IL13R $\alpha$ 1 expression within granulomas. (A) Enhanced expression of IL4R $\alpha$ , IL13R $\alpha$ 1, P-JAK3, and P-STAT6 in macrophages (CD68<sup>+</sup>) within the granulomatous microenvironment. A marked increase in the expression of these proteins surrounding giant cells (yellow arrows). (B) Western blot analysis shows increased expression of P-JAK3 (Tyr980/981) and P-STAT6 (Tyr641) in the granuloma of CS hearts.**



**Suppl. Figure 2: Abundant expression and activation of IL7R $\alpha$  cascade in macrophages of granuloma.** Western blot analysis of P-IL7R $\alpha$  (Tyr449), total IL7R $\alpha$ , P-JAK2 (Tyr1008), and P-STAT5 (Tyr694) in granuloma of CS hearts. The nuclei are stained blue with Dapi.



**Suppl. Figure 3: Expression of Acetyl-H3K9 and TGF $\beta$  further reinforces fibrosis in granuloma.** Enhanced expression of Acetyl-H3K9 in macrophages (CD68 $^+$ ) and TGF $\beta$  in granuloma of CS hearts.