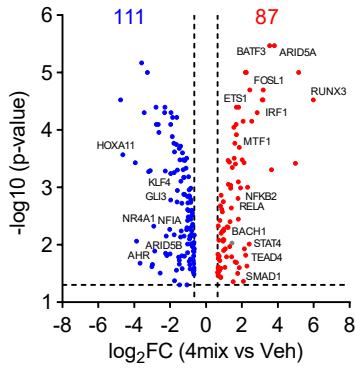
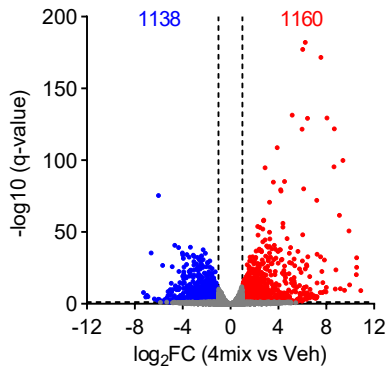


Supplementary Fig. 1

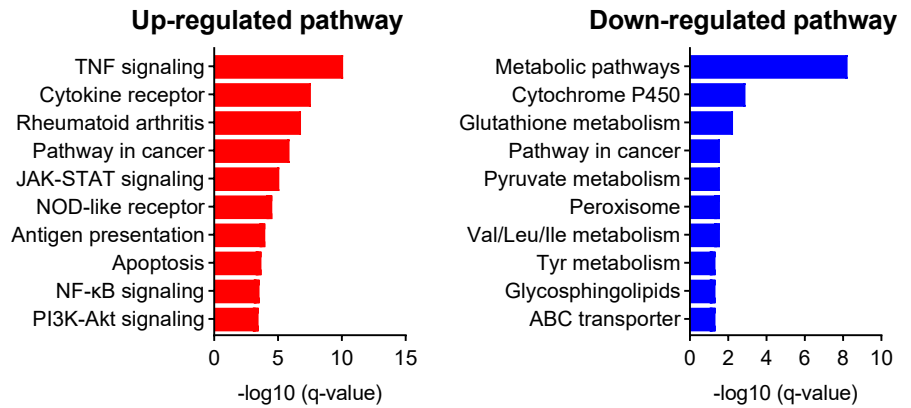
a



b

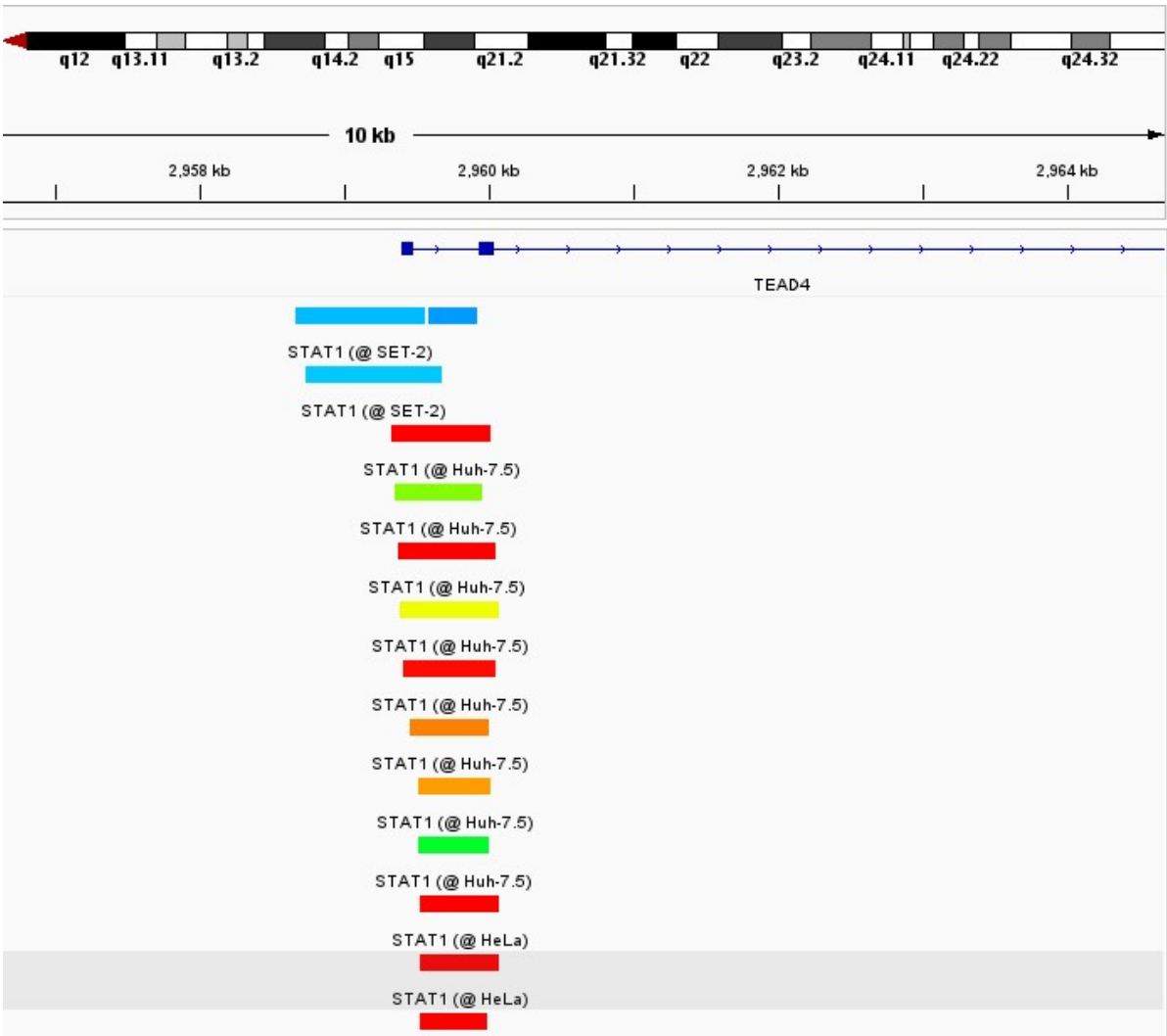


c



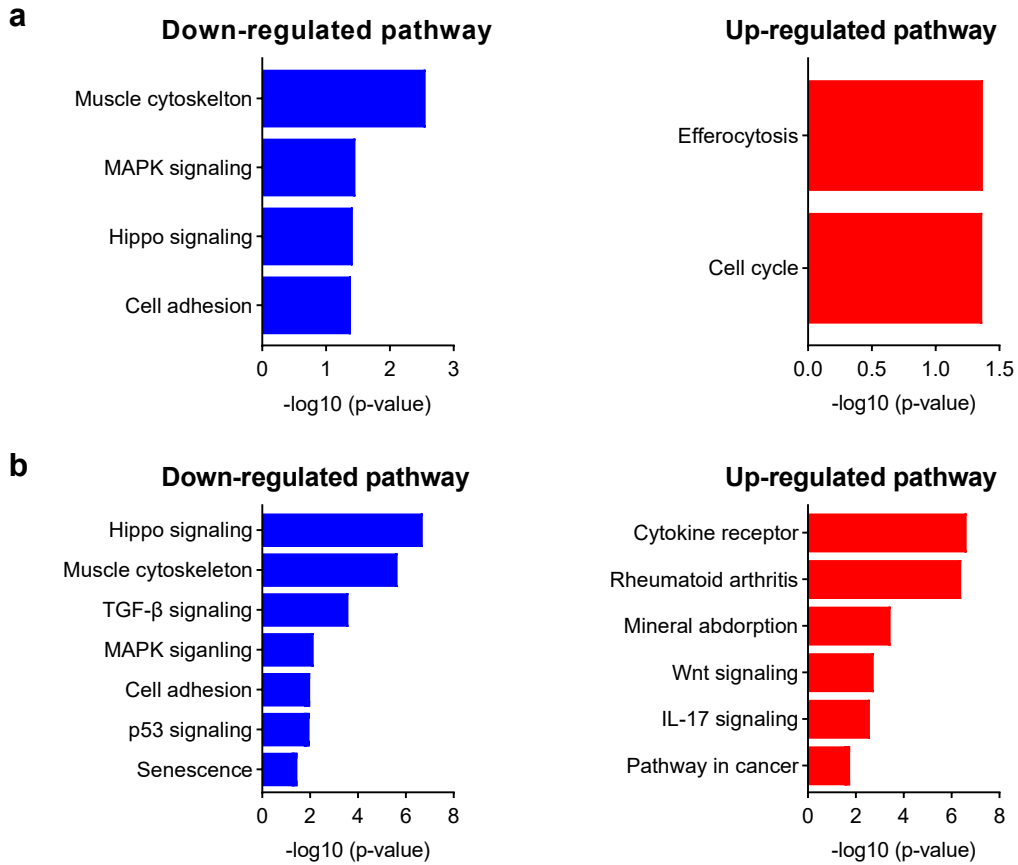
Supplementary Fig. 1 DIA-MS and RNA-seq analysis of RASFs following 4mix stimulation. a Volcano plot of transcription factor proteins differentially expressed in nuclear extracts of RASFs treated with 4mix (TNF- α , IL-1 β , IFN- γ , and TGF- β 1) compared with vehicle (n = 3, $|\log_2FC| > 0.65$, $p < 0.05$). **b** Volcano plot of DEGs in RASFs following 4mix stimulation compared with vehicle (n = 3, $|\log_2FC| > 1.0$, $q < 0.05$). **c** KEGG pathway enrichment analysis of DEGs. Top 10 pathways ($q < 0.05$) are shown.

Supplementary Fig. 2



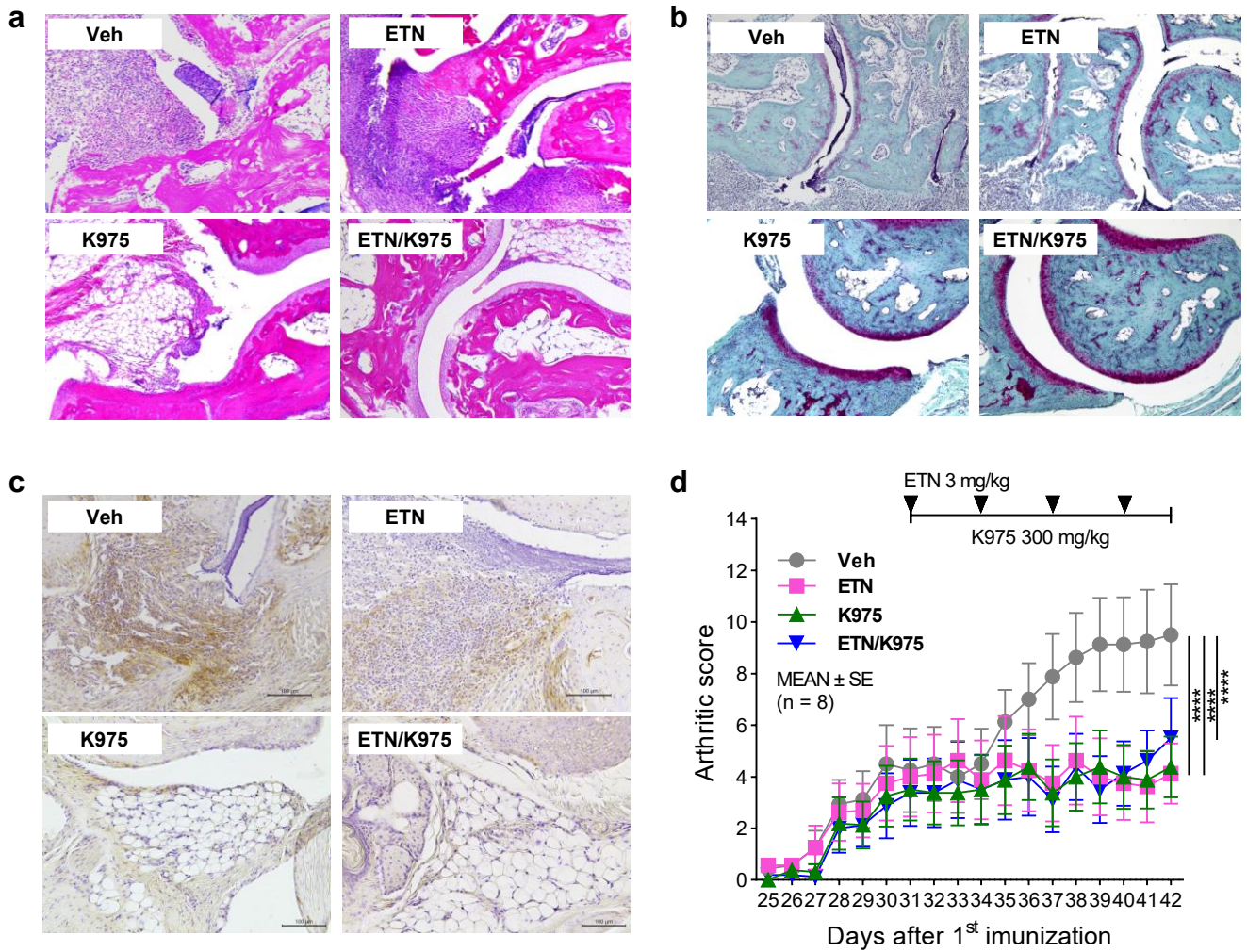
Supplementary Fig. 2 STAT1 binding to the TEAD4 promoter. ChIP-seq data from ChIP-Atlas showing STAT1 binding at the TEAD4 promoter in IFN- γ -stimulated cells (Set-2, HeLa, and HuH-7).

Supplementary Fig. 3



Supplementary Fig. 3 Transcriptomic and signaling analyses of RASFs following TEAD or YAP/TAZ knockdown. **a,b** KEGG pathway enrichment analysis of differentially expressed genes (DEGs) in 4mix-stimulated RASFs transfected with siTEAD1/3/4 (**a**) or siYAP/TAZ (**b**) compared with siControl. The top enriched pathways ($p < 0.05$) are shown.

Supplementary Fig. 4



Supplementary Fig. 4 Histological and therapeutic evaluation of CIA treated with pan-TEAD inhibitor K975 and TNF blockade. **a** Higher-magnification H&E images corresponding to Figure 5C, used for assessment of inflammation and bone erosion scores. **b** Representative Safranin O staining of articular cartilage. **c** Immunohistochemical staining for fibroblast activation protein (FAP) in hind paws. FAP staining intensity was scored as 0 (none), 1 (weak), or 2 (strong) using anti-FAP antibodies. $n = 6$ per group. Data are shown as mean \pm SEM; one-way ANOVA with Dunnett's test. $*P < 0.05$. **d** Therapeutic CIA model. Treatment was initiated on day 31 after disease onset with K975 (300 mg/kg) with or without etanercept (ETN, 3 mg/kg, intraperitoneally on days 31, 34, 37, and 40). $n = 8$ per group. Data are shown as mean \pm SEM; two-way ANOVA with Bonferroni's test. $****P < 0.0001$.