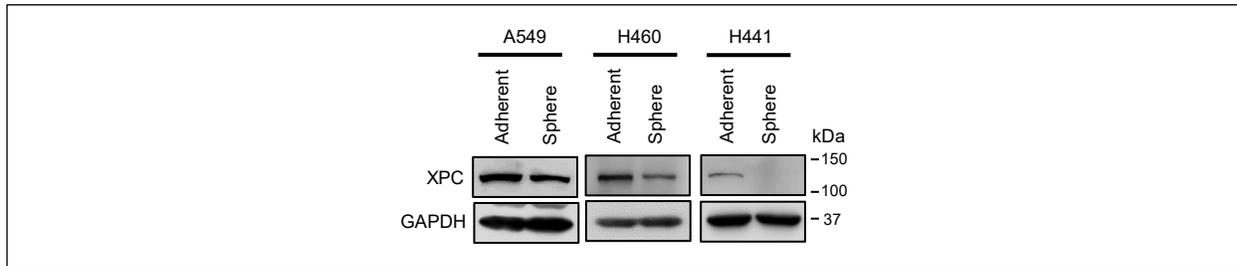
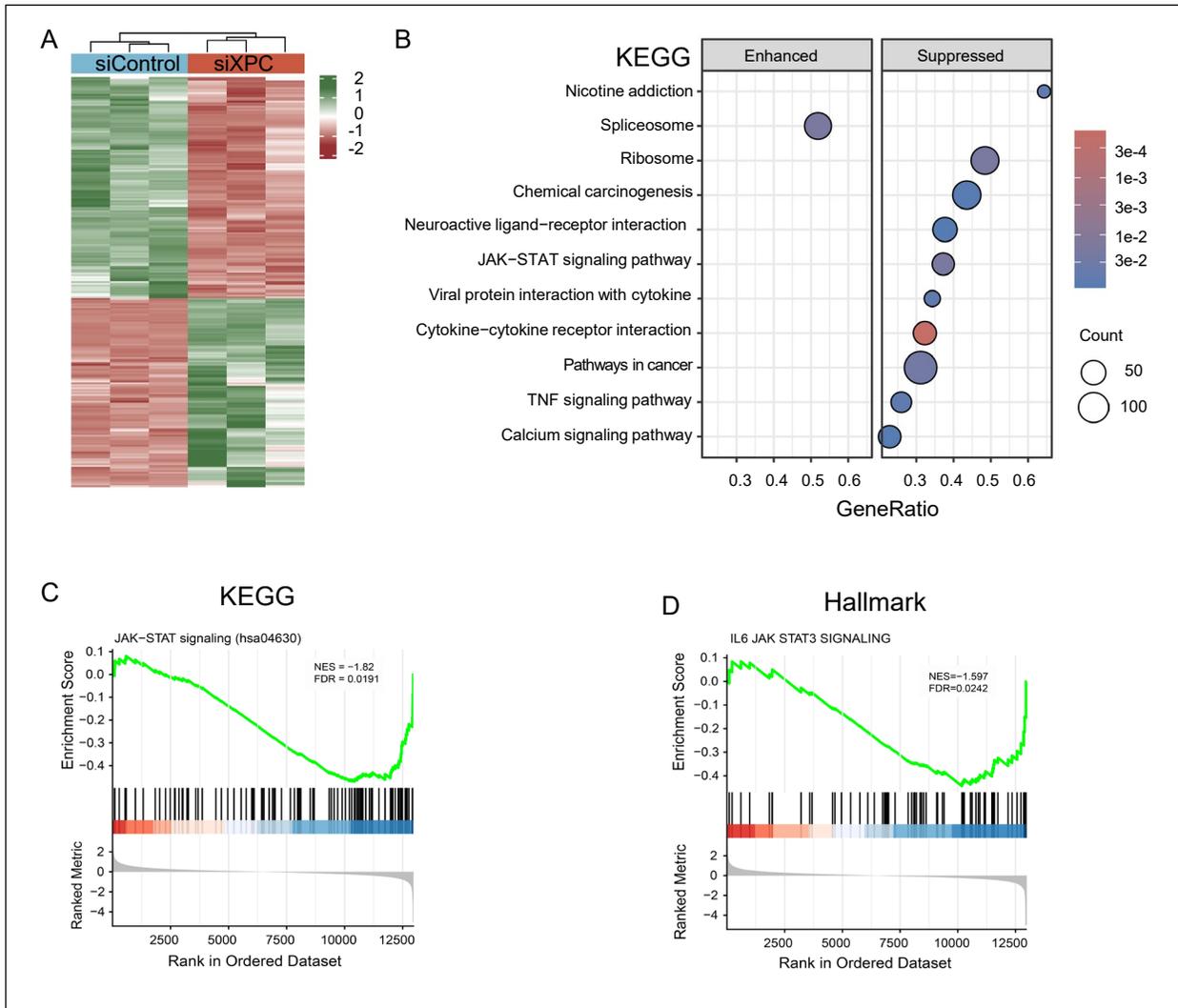


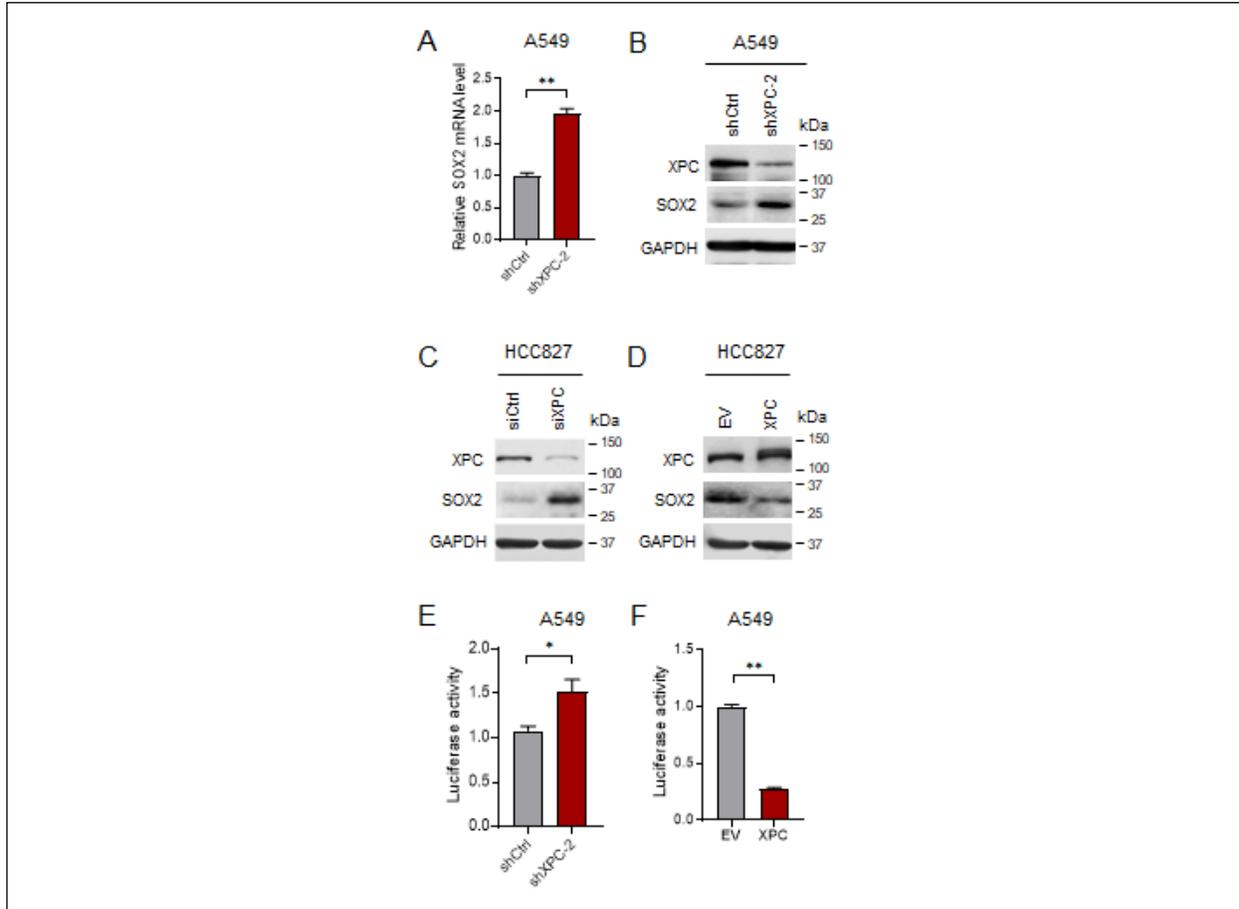
Supplementary Figures



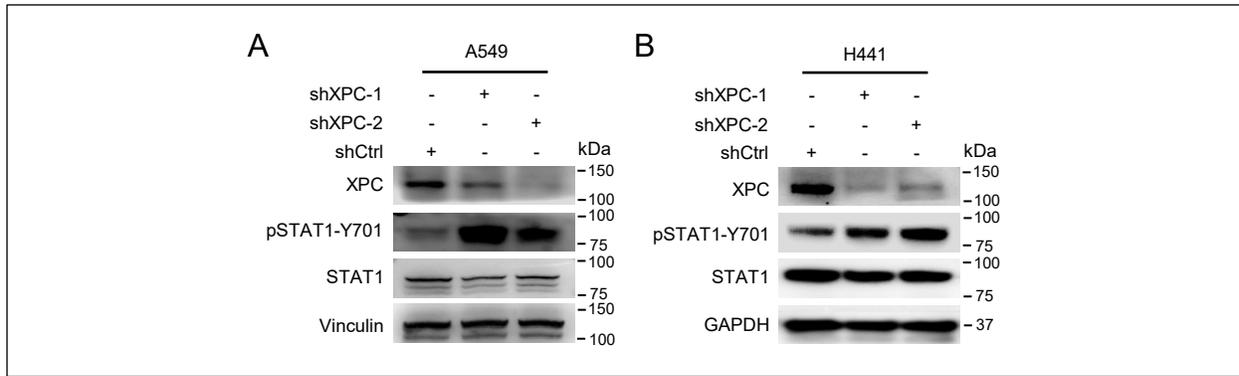
Supplementary Fig. S1. Reduced XPC expression in stem-like cancer cells. NSCLC cell lines A549, H460, and H441 were cultured either under standard adherent conditions with complete medium (Adherent) or in ultra-low attachment dishes with serum-free 3D Tumor Sphere Medium XF to enrich cancer stem-like cells (Sphere). XPC expression was evaluated by immunoblotting.



Supplementary Fig. S2. RNA-seq reveals transcriptional reprogramming and altered STAT signaling upon XPC depletion. **A.** Heat map showing differentially expressed genes in A549 cells transfected with pooled XPC siRNA (siXPC) or control siRNA (siControl), as determined by RNA-seq analysis. Genes were hierarchically clustered based on normalized expression values, highlighting transcriptional changes induced by XPC depletion. **B.** Gene Set Enrichment Analysis (GSEA) of RNA-seq data comparing siXPC and siControl A549 cells. Enrichment was assessed against curated KEGG pathway gene sets. **C, D.** Enrichment of the JAK-STAT signaling pathway from KEGG and the IL6-JAK-STAT3 signaling gene set from the Hallmark collection is shown, with normalized enrichment scores (NES) and false discovery rates (FDR) indicated.



Supplementary Fig. S3. XPC negatively regulates SOX expression. **A, B.** A549 cells were stably transfected with XPC shRNA, SOX2 expression was determined at the mRNA (A) or protein (B) levels. **C, D.** HCC827 cells were transiently transfected with either XPC siRNA (C) or an XPC expression plasmid (D), and SOX2 expression was assessed by immunoblotting. **E, F.** A549 cells were transiently transfected with either XPC siRNA (E) or an XPC expression plasmid (F) for 24 h, followed by co-transfection with the pGL3-SOX2 luciferase reporter and the pRL-TK Renilla control plasmid. Luciferase activity was measured 48 h after transfection. n = 3, bar: SD, *: P < 0.05; **: P < 0.01.



Supplementary Fig. S4. Downregulation of XPC increases STAT1 phosphorylation at Tyr 701. A549 (A) and H441 (B) cells were stably transfected with distinct XPC shRNA. STAT1 phosphorylation at Tyr701 was analyzed by immunoblotting.