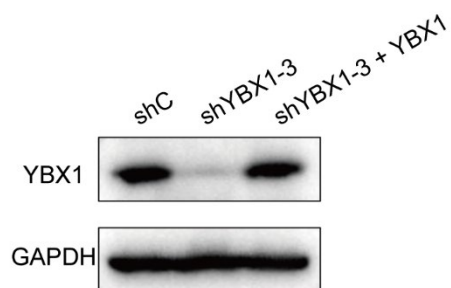
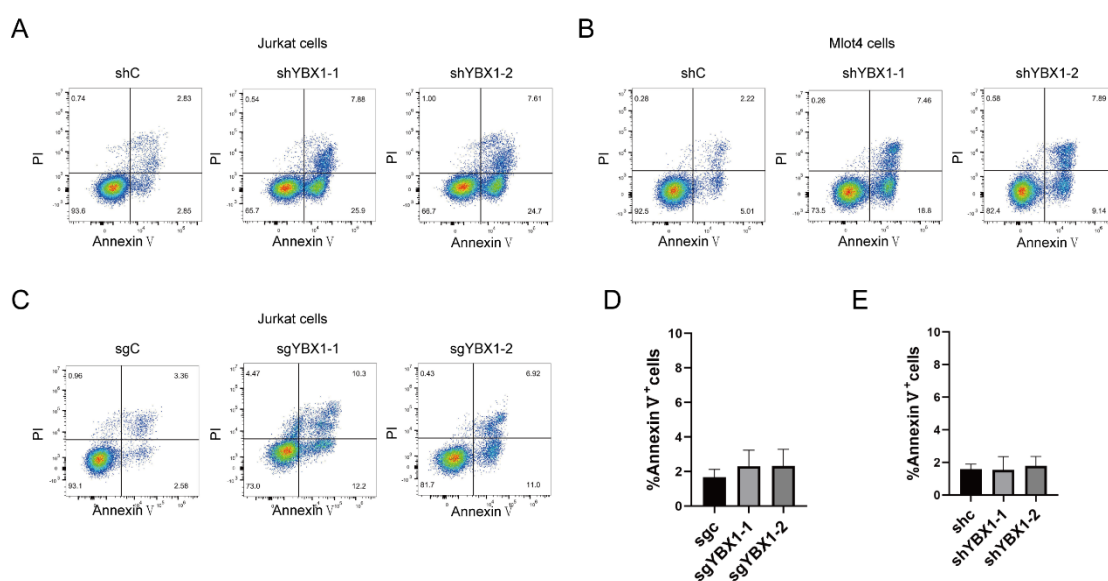


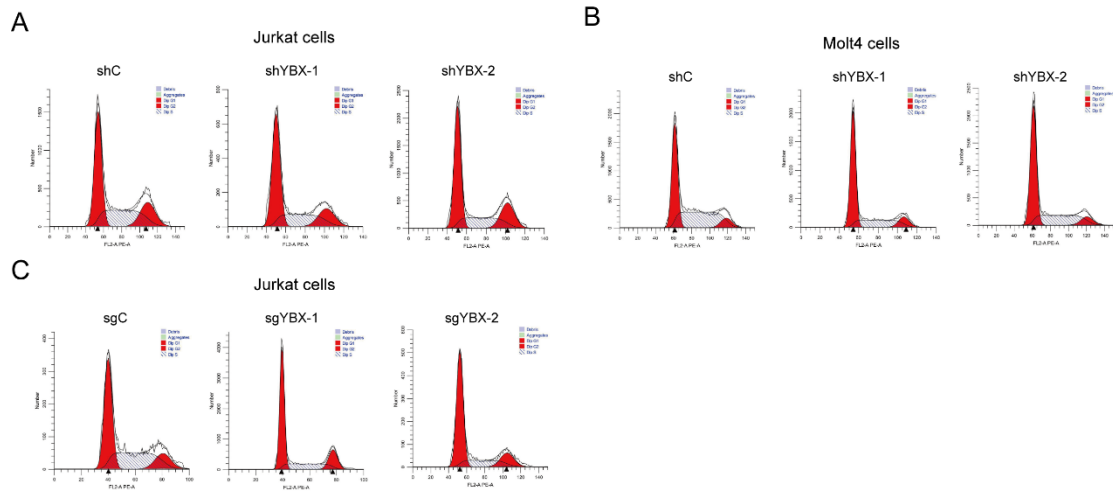
Supplementary materials



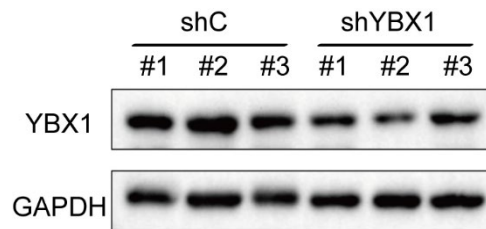
Supplementary Figure 1. Overexpression of YBX1 rescues the loss of YBX1 caused by shRNA.



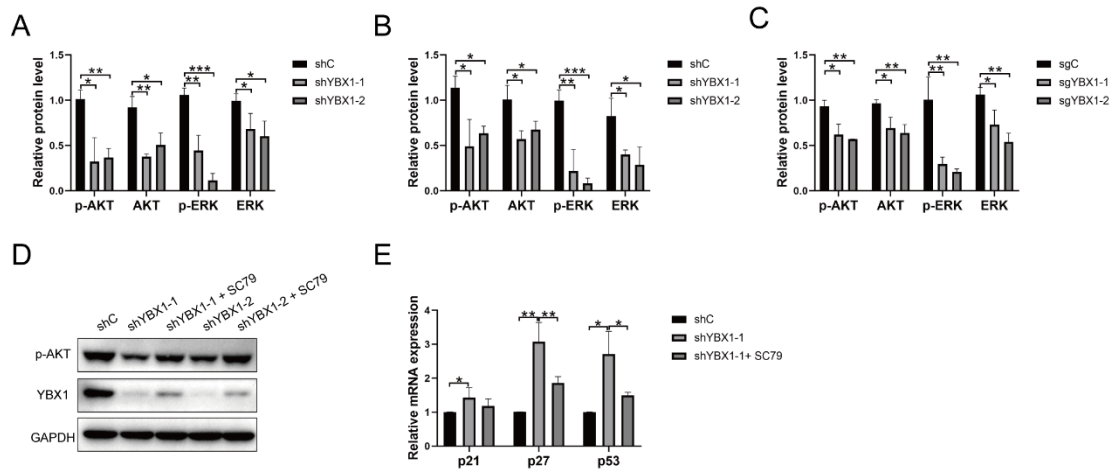
Supplementary Figure 2. YBX1 depletion induces cell apoptosis in Jurkat and Molt4 cells, but has little effect on apoptosis in HEK293T cells. (A-C) Representative images of apoptosis analysis by flow cytometry. (D, E) Cell apoptosis was examined in HEK293T cells with YBX1 knockout (D) or knockdown (E) by flow cytometry using Annexin V/PI staining.



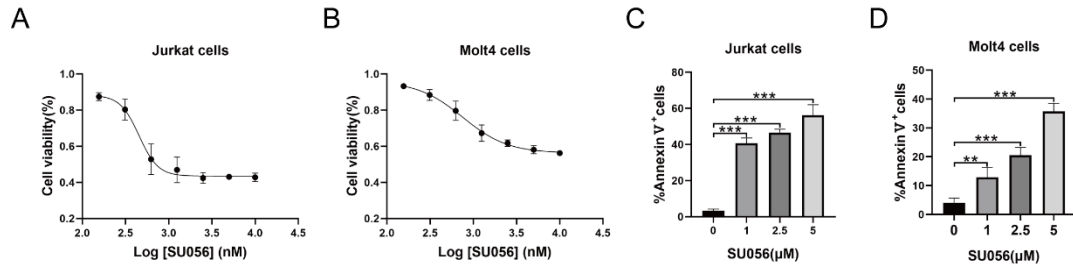
Supplementary Figure 3. Representative flow cytometry graphs of cell cycle.



Supplementary Figure 4. YBX1 was knocked down in leukemia cells of NOTCH1-induced mice.



Supplementary Figure 5. YBX1 regulates AKT and ERK signaling pathways in T-ALL cells. (A-C) Statistical analysis of p-AKT, total AKT, p-ERK, total ERK in Jurkat (A, C) and Molt4 cells (B) was performed using band gray values by Image J. (D) The protein expression of p-AKT was analyzed by western blot in Jurkat cells with or without SC79 treatment. (E) The mRNA expression of cell cycle related genes was analyzed by qRT-PCR in Jurkat cells with or without SC79 treatment. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$



Supplementary Figure 6. SU56 has an antileukemic effect in T-ALL cell lines. (A, B) Cell viability analysis in Jurkat (A) and Molt4 (B) cells subjected to SU56 treatment at various concentrations for 24 h. (C, D) The percentage of cell apoptosis in Jurkat (C) and Molt4 (D) cells treated with SU56 for 24 h. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Supplemental table 1 shRNA, sgRNA sequences and RT-PCR sequences

YBX1-F	TAGACGCTATCCACGTCGTAG	qPCR primers for human genes
YBX1-R	ATCCCTCGTTCTTTTCCCCAC	
Myc-F	GTCAAGAGGGCGAACACACAAC	
Myc-R	TTGGACGGACAGGATGTATGC	
Bim-F	TAAGTTCTGAGTGTGACCGAGA	
Bim-R	GCTCTGTCTGTAGGGAGGTAGG	
Bad-F	CCAGAGTTTGAGCCGAGTGAGCAGG	
Bad-R	TGGTGACTGGCGTCCCACAGGA	
p18-F	GGGGACCTAGAGCAACTTACT	
p18-R	CAGCGCAGTCCTTCCAAAT	
p19-F	AGTCCAGTCCATGACGCAG	
p19-R	ATCAGGCACGTTGACATCAGC	
p21-F	TGTCCGTCAGAACCCATGC	
p21-R	AAAGTCGAAGTTCCATCGCTC	
p27-F	TAATTGGGGCTCCGGCTAACT	
p27-R	TGCAGGTCGCTTCCTTATTCC	
p53-F	CAGCACATGACGGAGGTTGT	
p53-R	TCATCCAAATACTCCACACGC	
FGFR1-F	GTGGTCTTTCGGGGTGCT	
FGFR1-R	GGTGCAGTACTGGGCTTGT	
VEGFA-F	AGGGCAGAATCATCACGAAGT	
VEGFA-R	AGGGTCTCGATTGGATGGCA	
B2M-F	GAGGCTATCCAGCGTACTCCA	
B2M-R	CGGCAGGCATACTCATCTTTT	
shhYBX1-1-F	AGCAGACCGTAACCATTATAG	shRNA primers targeting hYBX1
shhYBX1-1-R	CTATAATGGTTACGGTCTGCT	
shhYBX1-2-F	CCAGTTCAAGGCAGTAAATAT	
shhYBX1-2-R	ATATTTACTGCCTTGAAGTGG	
shhYBX1-3-F	GCTTGACCCAGTCTACAAATA	
shhYBX1-3-R	TATTTGTAGACTGGGTCAAGC	
shmYBX1-F	GAGAACCCTAAACCACAAGAT	
shmYBX1-R	ATCTTGTGGTTTAGGGTTCTC	
sghYBX1-1-F	GTCTTGCAGGAATGACACCA	Target sequences for sgRNA
sghYBX1-1-R	TGGTGCATTCCTGCAAGAC	
sghYBX1-2-F	GCAAATGTTACAGGTCCTGG	
sghYBX1-2-R	CCAGGACCTGTAACATTTGC	