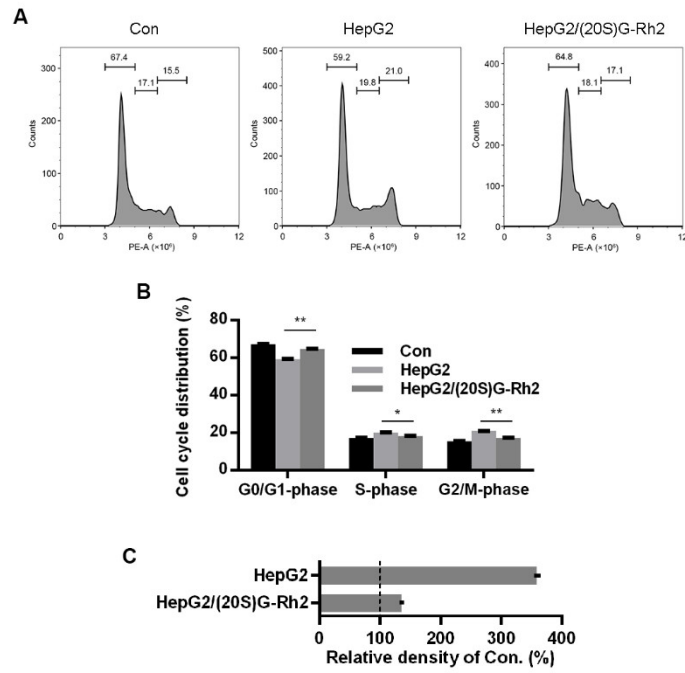
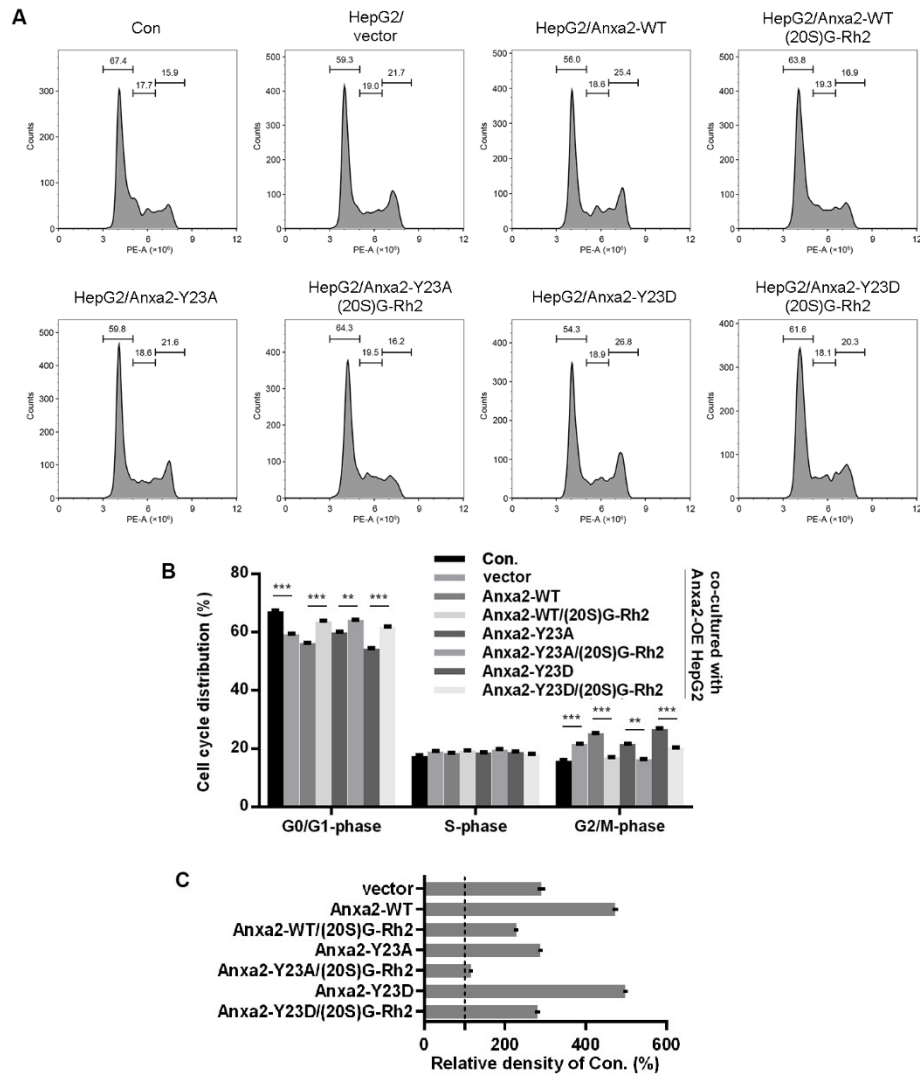


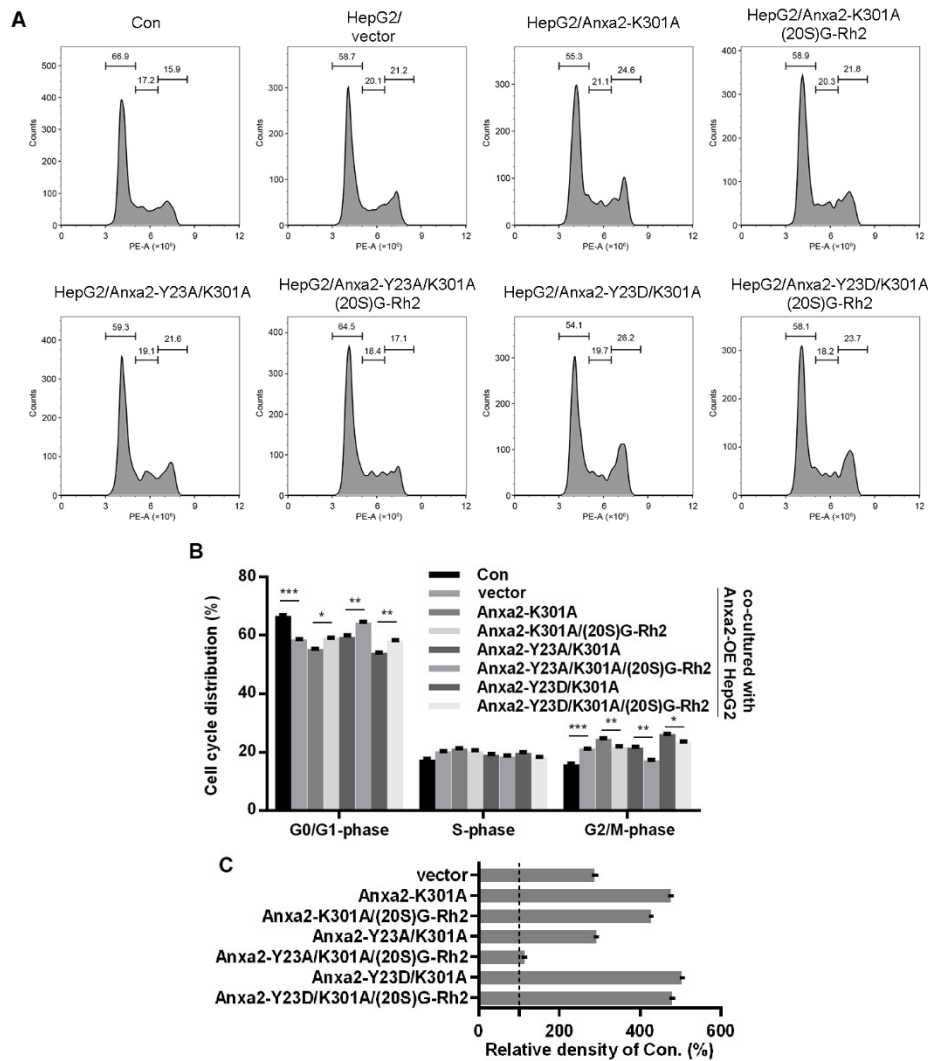
**Figure S1. (A, B)** The cell cycle of HUVECs co-cultured with HepG2 cells was determined by flow-cytometry. The fluorescence distribution **(A)** of HUVECs and cell cycle distribution **(B)** were shown as histogram. **(C)** Quantitative analysis of migrated HUVECs attached to Fig. 2F.



**Figure S2.** (A, B) The cell cycle of HUVECs co-cultured with (20S)G-Rh2 pre-treated HepG2 cells was determined by flow-cytometry. The florescence distribution (A) of HUVECs and cell cycle distribution (B) were shown as histogram. (C) Quantitative analysis of migrated HUVECs attached to Fig. 4F.



**Figure S3.** (20S)G-Rh2 inhibited Anxa2-Y23D mutant-enhanced proliferation and migration of HUVECs. **(A, B)** The cell cycle of HUVECs co-cultured with Anxa2-over-expressing HepG2 cells was determined by flow-cytometry. The florescence distribution **(A)** of HUVECs and cell cycle distribution **(B)** were shown as histogram. **(C)** Quantitative analysis of migrated HUVECs attached to Fig. 6F.



**Figure S4.** Anxa2-K301A mutant maintained pro-proliferation and pro-migration capability of HepG2 cells under (20S)G-Rh2 treatment. **(A, B)** The cell cycle of HUVECs co-cultured with Anxa2-over-expressing HepG2 cells was determined by flow-cytometry. The fluorescence distribution **(A)** of HUVECs and cell cycle distribution **(B)** were shown as histogram. **(C)** Quantitative analysis of migrated HUVECs attached to Fig. 8F.

**Table S1 Sequences of Anxa2 shRNA vectors**

No.		Sequences
1#	Target	GATAGGTACAAGAGTTACAGC
Anxa2-Homo-741	Sense	CACCGATAGGTACAAGAGTTACAGCTTC AAGAGAGCTGTAACCTCTTGACCTATCTT TTTTG
	Anit-sense	GATCCAAAAAAGATAGGTACAAGAGTTA CAGCTCTCTTGAAGCTGTAACCTCTTGTA CCTATC
2#	Target	CTGAATTCAAGAGAAAGTACG
Anxa2-Homo-967	Sense	CACCGCTGAATTCAAGAGAAAGTACGTT CAAGAGACGTACTTTCTCTTGAATTCAG TTTTTTG
	Anit-sense	GATCCAAAAAACTGAATTCAAGAGAAAG TACGTCTCTTGAACGTACTTTCTCTTGAA TTCAGC
3#	Target	CTTCCAGCTAACAGGTCTAGA
Anxa2-Homo-1116	Sense	CACCGCTTCCAGCTAACAGGTCTAGATT CAAGAGATCTAGACCTGTTAGCTGGAAG TTTTTTG
	Anit-sense	GATCCAAAAAACTTCCAGCTAACAGGTC TAGATCTCTTGAATCTAGACCTGTTAGCT GGAAGC

**Table S2 Primer list of STAT3 target genes**

Gene Name		Sequences
CDC25A	F	TCTGGACAGCTCCTCTCGTCAT
	R	ACTTCCAGGTGGAGACTCCTCT
CDC25C	F	AGAAGCCCATCGTCCCTTTGGA
	R	GCAGGATACTGGTTCAGAGACC
CDC37B	F	GAGAGTGACTTCGACGTGTTCC
	R	TCCATTTGCACGCCACAGAGCT
CCND1	F	TCTACACCGACAACCTCCATCCG
	R	TCTGGCATT TTTGGAGAGGAAGTG
CCNG1	F	CCTTCTGTGTTGGCATTGTCTATC
	R	CAAGCTCTTGCCAGAAGGTCAG
CCNI	F	CTTCACACAGCCACACCATTGG
	R	GTAGTTGCTTGGTAAGGACTGCC
CCNJ1	F	ACTGGACCTGTTTATGGACCGC
	R	TGCTCCAGCTTAGGCACACTGT
CCNK1	F	CACTATGATACCCTGGCAACTGG
	R	CAGAAAGAGGGCAACAGGCTCCT
EGFR	F	AACACCCTGGTCTGGAAGTACG
	R	TCGTTGGACAGCCTTCAAGACC
VEGFA	F	TTGCCTTGCTGCTCTACCTCCA
	R	GATGGCAGTAGCTGCGCTGATA
VEGFB	F	AAGGACAGTGCTGTGAAGCCAG
	R	TGGAGTGGGATGGGTGATGTCA
VEGFC	F	GCCAATCACACTTCCTGCCGAT
	R	AGGTCTTGTTGCTGCCTGACA
VEGFD	F	GACTGGAAGCTGTGGAGATGCA
	R	GGCTGCACTGAGTTCTTTGCCA
PTEN	F	TGAGTTCCCTCAGCCGTTACCT

GAPDH	R	GAGGTTTCCTCTGGTCCTGGTA
	F	GTCTCCTCTGACTTCAACAGCG
	R	ACCACCCTGTTGCTGTAGCCAA

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