

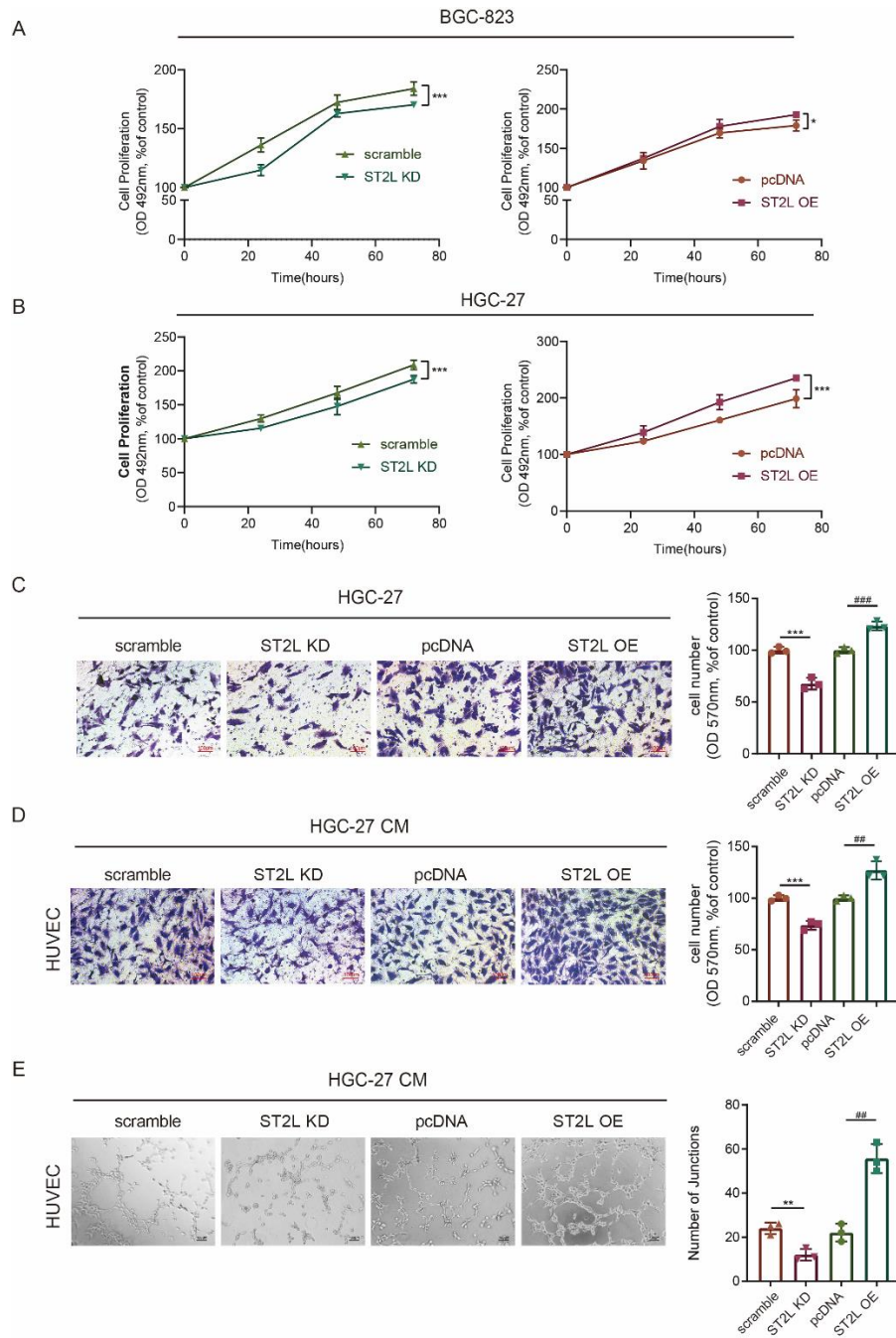


Fig. S1. ST2L expression is associated with proliferation, migration and angiogenesis *in vitro*. (A, B) The effect of ST2L expression on the proliferation of BGC-823 and HGC-27 cells was detected by MTT assay. (C) Transwell analysis was used to detect the migration ability of HGC-27 cells. (D) The migration ability of HUVECs after co-culture with the corresponding conditioned medium (CM) was measured by Transwell assay. (E) Formation of vascular was measured by HUVECs tube formation assay. * $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$, are assessed by Student's t test (two-tailed).

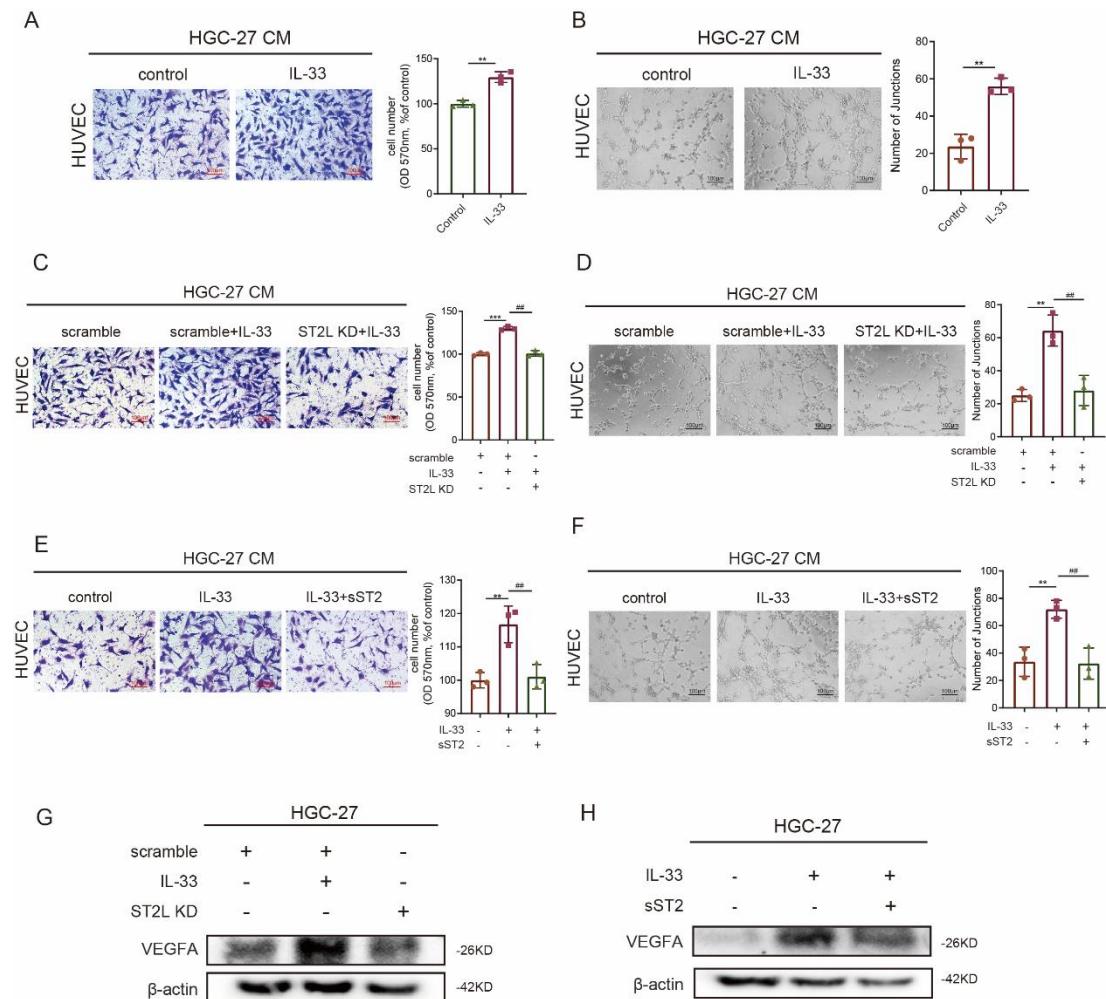


Fig. S2. ST2L induces gastric cancer angiogenesis *in vitro* by binding to its ligand IL-33, and this effect can be blocked by sST2. The effect of the corresponding CMs on the migration (A, C, E) and the vascular formation (B, D, F) of HUVECs. (G, H) Western blot analysis of VEGFA protein expression level. * $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$, are assessed by Student's t test (two-tailed).

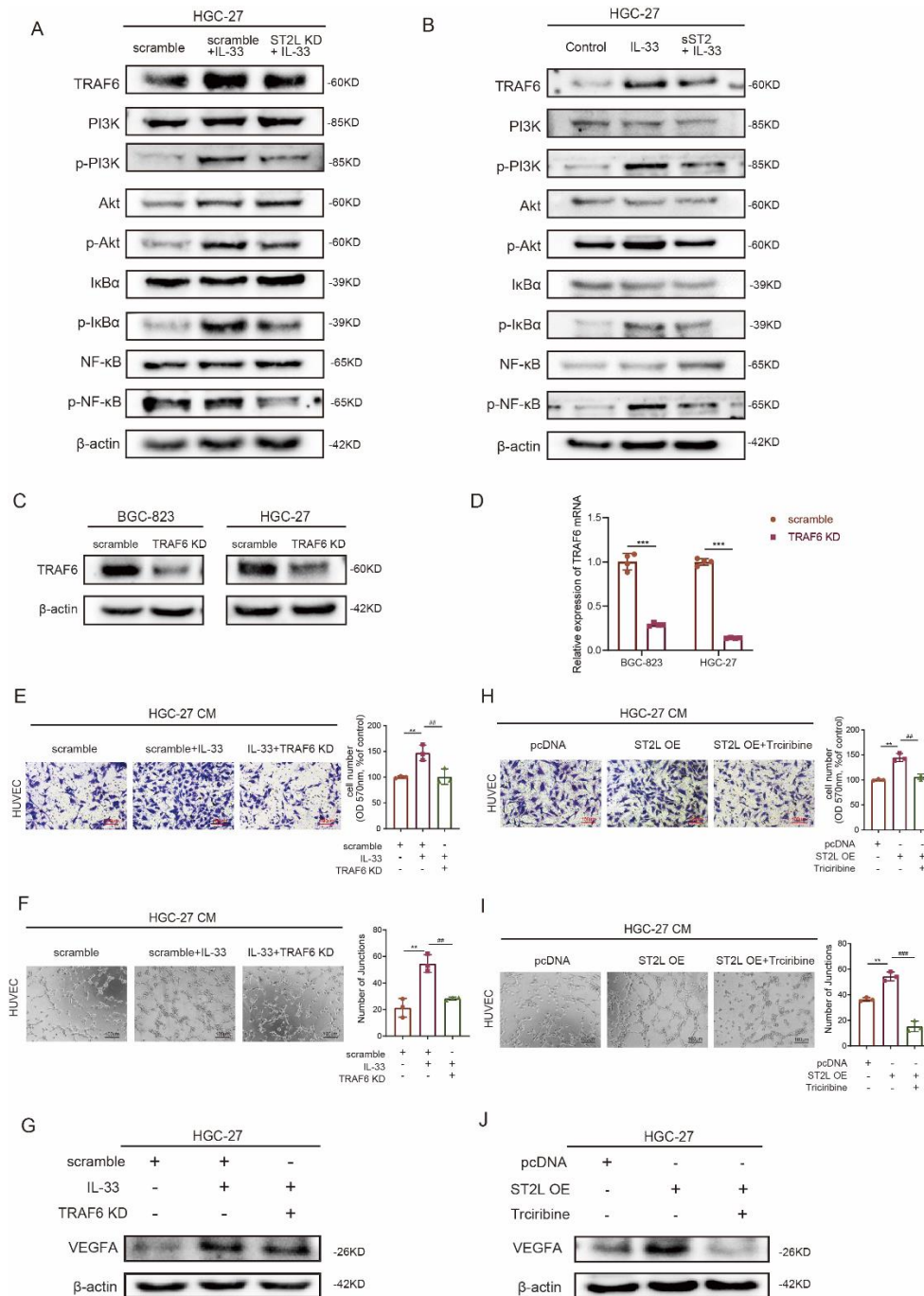


Fig. S3. IL-33/ST2L axis regulates the TRAF6-mediated PI3K/Akt/NF-κB signaling pathway to promote VEGFA-dependent vascular growth in gastric cancer cells. (A, B) Western blot analysis of the protein levels of TRAF6, PI3K, P-PI3K, AKT, P-AKT, IκBα, p-IκBα, NF-κB and p-NF-κB in each group of cells. (C, D) The efficiency of TRAF6 knockdown. Migration ability (E, H) and tube formation ability (F, I) of HUVECs. (G, J) The protein level of VEGFA was measured by Western blot assay. *P < 0.05, **P < 0.01, ***P < 0.001, are assessed by Student's t test (two-tailed).

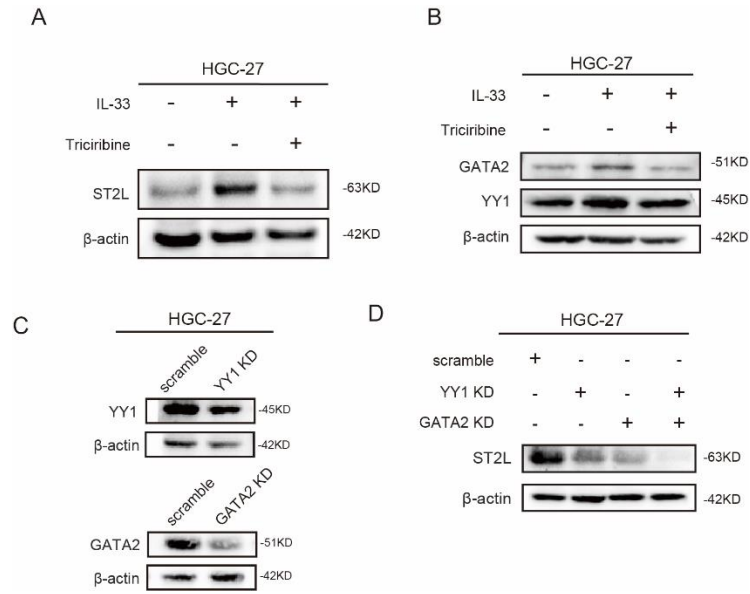


Fig. S4. Transcription factors YY1 and GATA2 participate in IL-33-mediated upregulation of ST2L transcription level. (A) Western blot assay was conducted to evaluate the protein levels of ST2L of each group. (B) Western blot analysis of YY1 and GATA2 protein expression level. (C, D) The occupancy of ST2L promoter bits was detected by ChIP-qPCR. (E) Validation of YY1 and GATA2 knockdown efficiency in HGC-27 cell line. (F) The protein levels of ST2L of each group. * $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$, are assessed by Student's t test (two-tailed).

Gene name	sense sequence (5'-3')
ST2L	5'-GCGAAUGUCACCAUAUAUA-3'
TRAF6	5'-CCCAGUCACACAUGAGAAUTT-3'
YY1	5'- GACGACGACTACATTGAACAA-3'
GATA2	5'- UUCUUGGACUUGUUGGACAUCUCC-3'

Table S1. siRNA sequences.

Antibody name	Company	dilution
Anti-ST2	Cat. No. AB_2839739, Affinity	1:1500
Anti-VEGF-A	Cat. No. AF5131, Affinity Biosciences	1:1000
Anti-TRAF6	Cat. No. CY5174, Abways	1:1000
Anti-AKT	Cat. No. 9272S, Cell Signaling	1:1000
Anti-phospho-Akt (Ser473)	Cat. No. 4060S, Cell Signaling	1:1000
Anti-PI3K kinase p85	Cat. No. 4257S, Cell Signaling	1:1000
Anti-phospho-PI3K kinase p85	Cat. No. 4228S, Cell Signaling	1:1000
Anti-IKB alpha	Cat. No. T55026S, Abmart	1:1000
Anti-phospho- IKB alpha	Cat. No. TA2002S, Abmart	1:1000
Anti-NF-κB p65	Cat. No. 8242S, Cell Signaling	1:1000
Anti-Phospho-NF-κB p65	Cat. No. 3033S, Cell Signaling	1:1000
Anti-YY1	Cat. No. WL01316, Wanleibio	1:1000
Anti-GATA2	Cat. No. 11103-1-AP, Proteintech	1:1000
Anti-beta Actin (β-actin)	Cat. No.AF7018, Affinity Biosciences	1:1000

Table S2. Antibodies used in western blot (WB)

Gene	Forward primer (5'-3')	Reverse primer (5'-3')
ST2L	GAAGGCACACCGTAAGACTA	TTGTAGTTCCGTGGGTAGAC
TRAF6	TGGATAGCTCAAACGTTC	TCCTCAAGATGTCTCAGTTCCAT
YY1	CCAAGTGGTTCATACTGGAG	AGGAGAGGCATATTTATTCGCA
GATA2	AAGGCTCGTTCCTGTTTCAGAAG	CCCATTTCATCTTGTTGGTAGAGG
GATA3	ACCACAACCACACTCTGGAGGA	TCGGTTTCTGGTCTGGATGCCT
TCF4	ACTGCCGACTACAATAGG	TGGATAGCTCAAACGTTC

Table S3. Primer sequences used in qRT-PCR.

Supporting image of Figure 5E.

