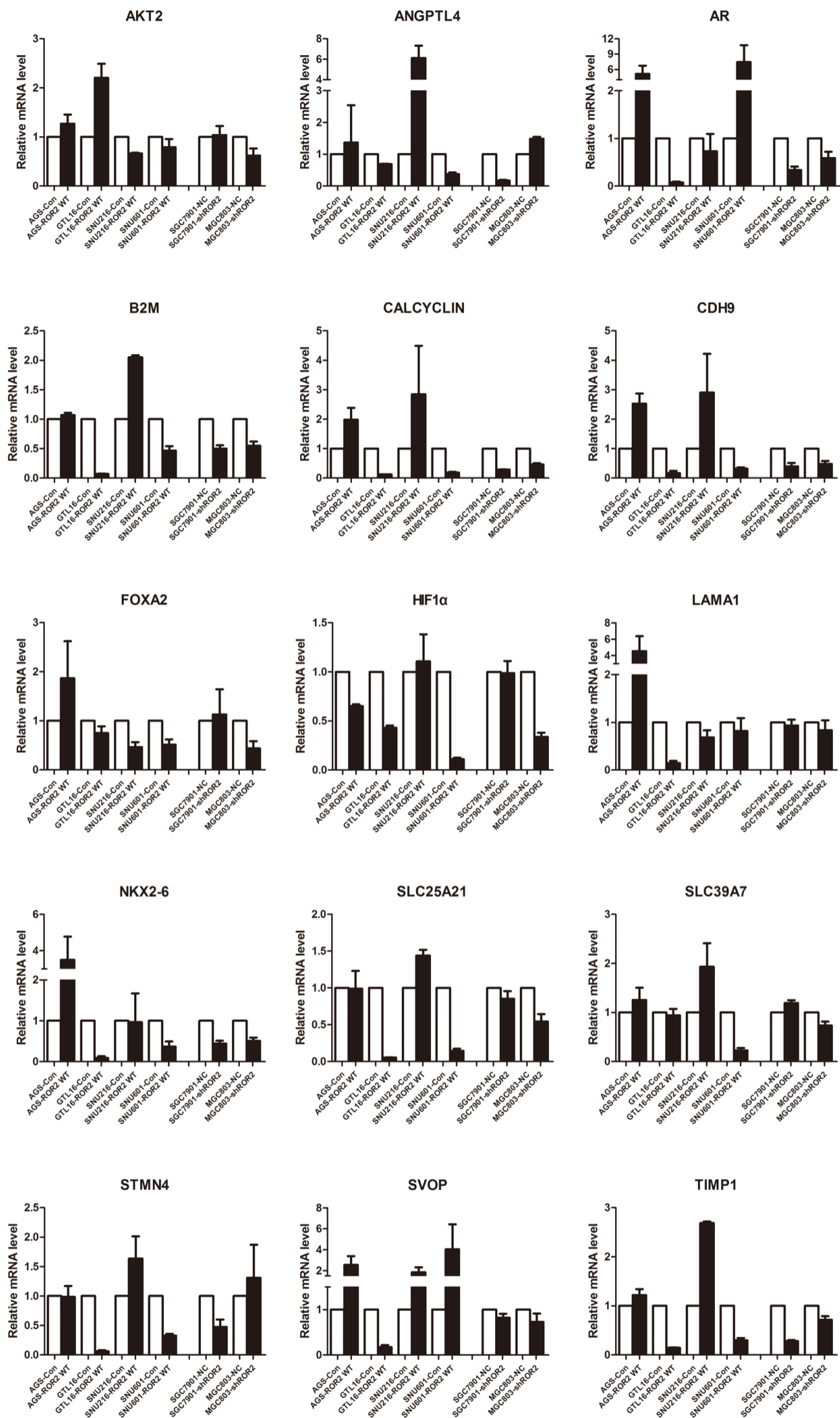


**Figure S1** ROR2 promoted gastric cancer cell migration and invasion *in vitro*. (A,B) AGS and GTL16 cells stably expressing ROR2 WT and Con as well as MGC803 cells stably expressing shROR2 and NC were subjected to transwell migration (A, AGS-Con *vs.* AGS-ROR2 WT  $P=0.022736$ , GTL16-Con *vs.* GTL16-ROR2 WT  $P=0.000899$ , MGC803-Con *vs.* MGC803-ROR2 WT  $P=0.000868$ ) and invasion assays (B, AGS-Con *vs.* AGS-ROR2 WT  $P=0.000305$ , GTL16-Con *vs.* GTL16-ROR2 WT  $P=0.003627$ , MGC803-Con *vs.* MGC803-ROR2 WT  $P=0.000487$ ). Representative images at 200 $\times$  magnification and quantitative analysis of transwell assays after crystal violet staining are presented. Columns are the mean of 3 independent experiments, and bars = SD. \* $P<0.05$ ; \*\* $P<0.01$ ; \*\*\* $P<0.001$ ; SD, standard deviation; ROR2 WT and Con, ROR2-overexpressing (WT) and the empty vector plasmids (Con); shROR2 and NC, short hairpin (shRNA) targeting ROR2 (shROR2) and the empty vector plasmids (NC).



**Figure S2** Screening for the ROR2-modulating gene. Representative qRT-PCR images of 15 genes closely related to tumor proliferation and migration were examined at the mRNA level according to signaling explorer antibody microarray. qRT-PCR was conducted using AGS-ROR2 WT, GTL16-ROR2 WT, SNU216-ROR2 WT, SNU601-ROR2, SGC7901-shROR2, MGC803-shROR2, and their respective control cells. Relative mRNA expressions are presented in groups. qRT-PCR, quantitative real-time polymerase chain reaction; ROR2 WT and Con, ROR2-overexpressing (WT) and the empty vector plasmids (Con); shROR2 and NC, short hairpin (shRNA) targeting *ROR2* (shROR2) and the empty vector plasmids (NC).

**Table S1** Sequence of qRT-PCR primers

Primer	Sequence
<i>ROR2</i> forward	TCCGAACGACCCCTTAGGAC
<i>ROR2</i> reverse	TTTAGCCACCGCACGTTAGG
<i>B2M</i> forward	GAGGCTATCCAGCGTACTCCA
<i>B2M</i> reverse	CGGCAGGCATACTCATCTTTT
<i>SVOP</i> forward	AAGACTGAATTTTTGCCACGA
<i>SVOP</i> reverse	GCCAAGCCAATGATGAGCA
<i>NKX2-6</i> forward	GTACCTGAGAATGGACGCAGA
<i>NKX2-6</i> reverse	GCTCCGAACCATCCAGCTTT
<i>RAB20</i> forward	AAGCCCAGACAGCAAGATCG
<i>RAB20</i> reverse	GGTGATTCACATCATAGGTGAGG
<i>STAT3</i> forward	CAGCAGCTTGACACACGGTA
<i>STAT3</i> reverse	AAACACCAAAGTGGCATGTGA
<i>AARSD1</i> forward	CTGGCTCATGTGGAACATTATGC
<i>AARSD1</i> reverse	GCAGGTGGAGGTCTCTTGG
<i>STMN4</i> forward	CTGGCCGATCCCCTGAATAAG
<i>STMN4</i> reverse	TCCAGTCAGCACTGTCTTTCC
<i>Claudin11</i> forward	CGGTGTGGCTAAGTACAGGC
<i>Claudin11</i> reverse	CGCAGTGTAGTAGAAACGGTTTT
<i>AKT2</i> forward	ACCACAGTCATCGAGAGGACC
<i>AKT2</i> reverse	GGAGCCACACTTGTAGTCCA
<i>SLC25A21</i> forward	CCAAGCCTGAAGTCAGCTTAG
<i>SLC25A21</i> reverse	TGCACATCTCTGAATCTGAAACC
<i>Calcyclin</i> forward	GGGAGGGTGACAAGCACAC
<i>Calcyclin</i> reverse	AGCTTCGAGCCAATGGTGAG
<i>SLC39A7</i> forward	GGACACGCTCACAGTCATACA
<i>SLC39A7</i> reverse	CTCCTCGCCTCTTCTGAACC
<i>LAMA1</i> forward	GTGATGGCAACAGCGCAA
<i>LAMA1</i> reverse	GACCCAGTGATATTCTCTCCCA
<i>CDH9</i> forward	TTCCATACAGTTGACACCATCCT
<i>CDH9</i> reverse	TCAGACCCGCTATCTTTTTGC
<i>TIMP1</i> forward	CTTCTGCAATCCGACCTCGT
<i>TIMP1</i> reverse	ACGCTGGTATAAGTGGTCTG
<i>Androgen receptor</i> forward	CCAGGGACCATGTTTTGCC
<i>Androgen receptor</i> reverse	CGAAGACGACAAGATGGACAA

**Table S1** (continued)**Table S1** (continued)

Primer	Sequence
<i>FOXA2</i> forward	GGAGCAGCTACTATGCAGAGC
<i>FOXA2</i> reverse	CGTGTTTCATGCCGTTTCATCC
<i>MMP3</i> forward	CTGGACTCCGACACTCTGGA
<i>MMP3</i> reverse	CAGGAAAGGTTCTGAAGTGACC
<i>PIAS1</i> forward	ACAGTGCGGAACTAAAGCAAA
<i>PIAS1</i> reverse	GGACTTGAATGTACGTTGGGG
<i>HIF1<math>\alpha</math></i> forward	ATGTAATGCTCCCCTCACCC
<i>HIF1<math>\alpha</math></i> reverse	CCTGAATCTGGGGCATGGTA
<i>EPAS1</i> forward	CGGAGGTGTTCTATGAGCTGG
<i>EPAS1</i> reverse	AGCTTGTGTGTTTCGCAGGAA
<i>ANGPTL4</i> forward	GGGTCTGGAGAAGGTGCATA
<i>ANGPTL4</i> reverse	GTGGAGAAGGGTACGGAGAG
<i>VEGFA</i> forward	CTGTCTTGGGTGCATTGGAG
<i>VEGFA</i> reverse	ACCAGGGTCTCGATTGGATG
<i>MMP3-region 1-forward</i>	AGCTATGTATGTACACTTTCCACT
<i>MMP3-region 1-reverse</i>	AGAGAAGAAGTAGGTTGACTTGGT
<i>MMP3-region 2-forward</i>	TGTGTTGCCTTGCAAAATTGG
<i>MMP3-region 2-reverse</i>	TTCATCCAAATGGCAGCAGG
<i>MMP3-region 3-forward</i>	TGGAATGTTTGAAATGGTCCTG
<i>MMP3-region 3-reverse</i>	GCGCAGCTTTTAAAGAGTGACA

qRT-PCR, quantitative real-time polymerase chain reaction.

**Table S2** Sequence of shRNAs

shRNA	Sequence
shROR2#1	ACAAGCTGAACGTGAAGAT
shROR2#2	ACAGCCCAAATCATAACTT

**Table S3** Predicted c-JUN binding sites in *MMP3* promoter region

Predicted site	Initial position	Terminal position	Sequence
CBS-1	-468	-455	CTTACATCTTTTA
CBS-2	-203	-190	GTTGTATCATCCT
CBS-3	-137	-124	AGGATGAGTCAAG