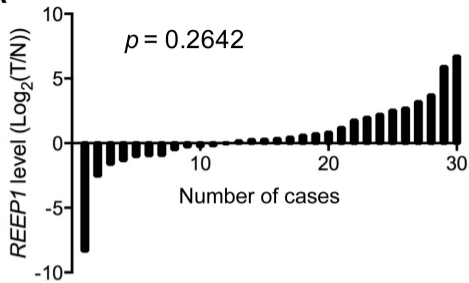
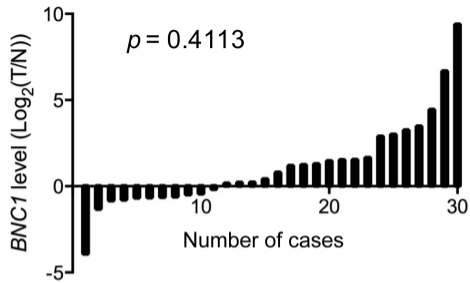
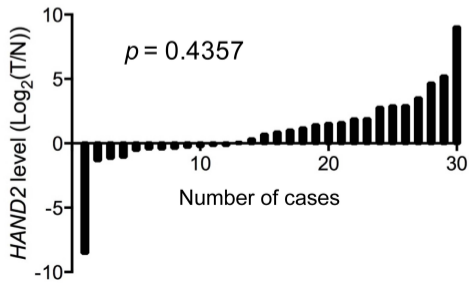
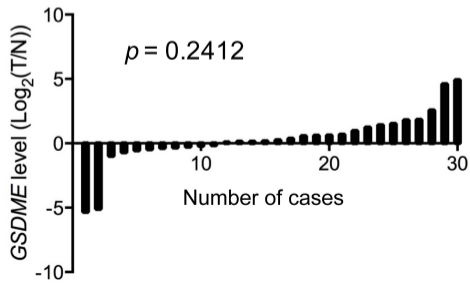
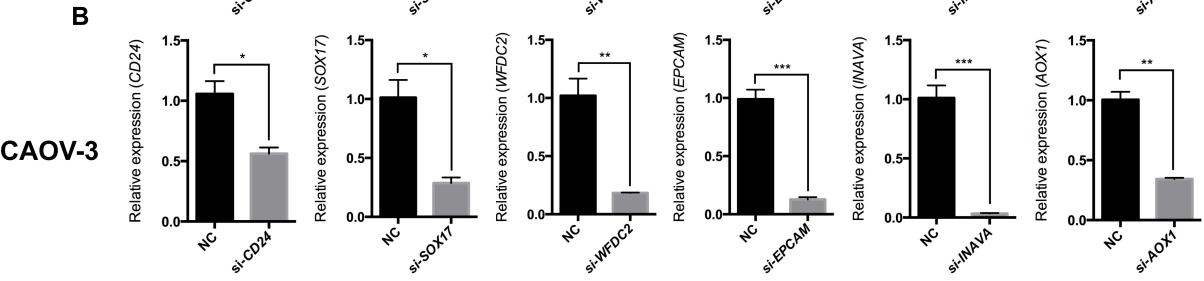
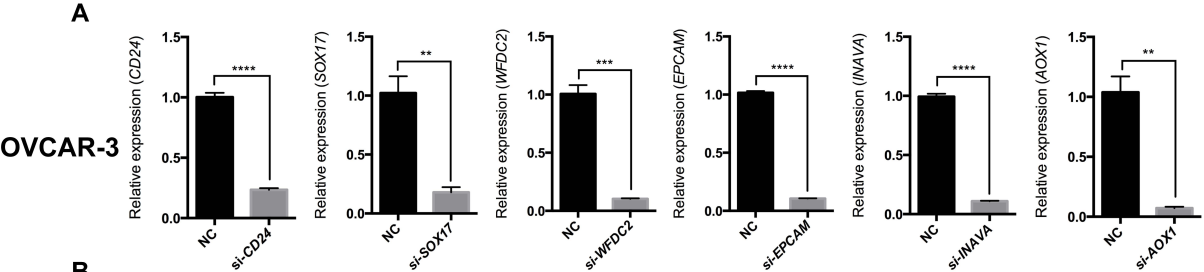
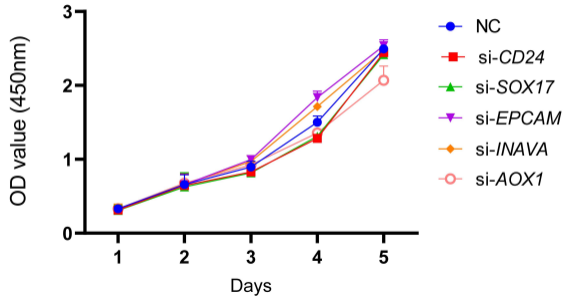
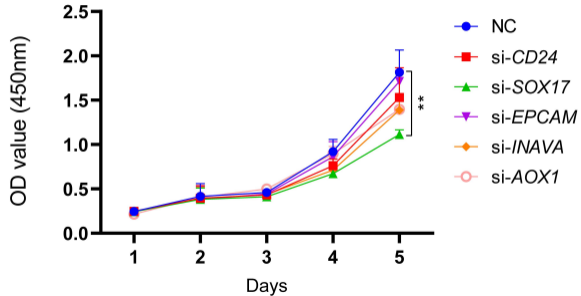


A**B****C****D**

Supplementary Figure 1. Four Down-regulated genes fail to be validated by extended samples. Relative gene levels of ovarian cancer and normal tissues measured by qPCR were shown using waterfall plot. **(A-D)** Represent the levels of *REEP1*, *BNC1*, *HAND2*, *GSDME* separately.

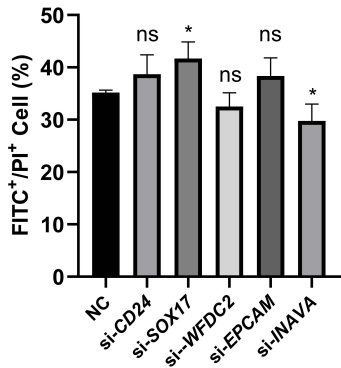
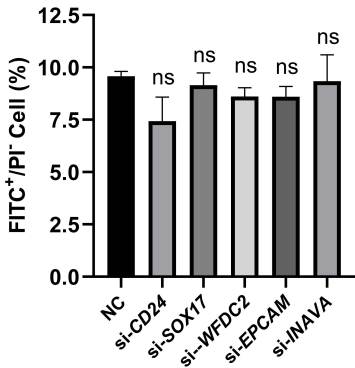


Supplementary Figure 2. Gene knockdown efficiency. (A-B) QPCR analysis for the expression of each gene in OVCAR-3 and CAOV-3 cells upon NC, si-*CD24*, si-*SOX17*, si-*WFDC2*, si-*EPCAM*, si-*INAVA* and si-*AOXI* transfection.

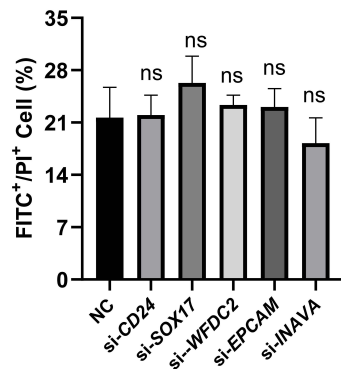
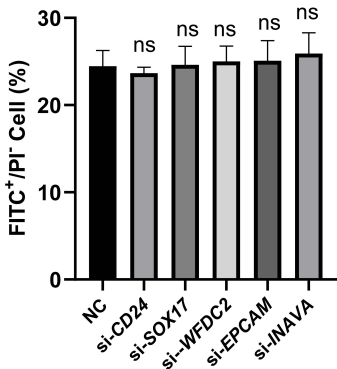
A**OVCAR-3****B****CAOV-3**

Supplementary Figure 3. Genes that have no effects on proliferation for ovarian cancer cells. (A-B) Growth curve of OVCAR-3 and CAOV-3 cells upon transfection with NC and si-*CD24*, si-*SOX17*, si-*EPCAM*, si-*INAVA* and si-*AOX1*. Transfected cells were counted and plated in 96-well plates.

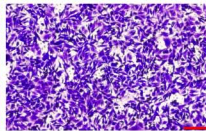
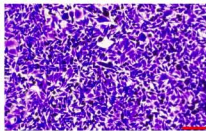
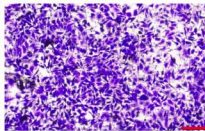
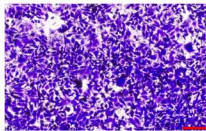
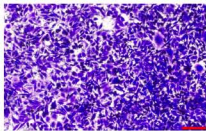
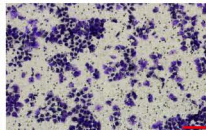
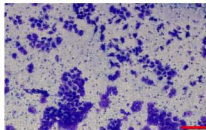
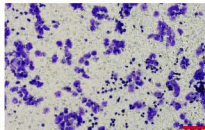
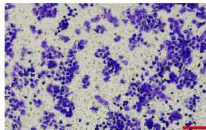
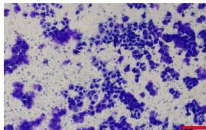
OVCAR-3



CAOV-3



Supplementary Figure 4. Genes that have no effects on apoptosis for ovarian cancer cells. NC, si-*CD24*, si-*SOX17*, si-*WFDC2*, si-*EPCAM* and si-*INAVA* were transfected into OVCAR-3 and CAOV-3 cells, cell apoptosis analysis was performed as indicated in methods.

NC**si-CD24****si-SOX17****si-EPCAM****si-AOX1****OVCAR-3****CAOV-3**

Supplementary Figure 5. Genes that have no effects on migration for ovarian cancer cells. Transwell assay analyzed the migration of OVCAR-3 and CAOV-3 upon NC, si-*CD24*, si-*SOX17*, si-*EPCAM*, si-*INAVA* and si-*AOX1* transfection (magnification, $\times 100$). Scale bar= 100 μ m.

Supplementary Table1. The clinicopathologic features of ovarian cancer patients.

Characteristics		Total number
Age	< 50	12
	≥ 50	18
Tumor grades	I-II	11
	III	19
Tumor stage	I-II	13
	III-IV	17

The table lists the age and tumor grade and tumor stage of the 30 ovarian cancer patients used in the study.

Supplementary Table 2. Oligo sequences used in the experiments.

Oligo ID	Sequence (5'-3')
Negative control	Sense: UUCUCCGAACGUGUCACGUTT Antisense: ACGUGACACGUUCGGAGAATT
<i>CD24</i> -siRNA	Sense: GCACUAAUUUAAUGCCGAUTT Antisense: AUCGGCAUUAAAUUAGUGCTT
<i>SOX17</i> -siRNA	Sense: CACGGAAUUUGAACAGUAUTT Antisense: AUACUGUUCAAAUUCGUGTT
<i>EPCAM</i> -siRNA	Sense: GGAUCAUCAUUGAACUAAATT Antisense: UUUAGUUCAAUGAUGAUCCTT
<i>WFDC2</i> -siRNA	Sense: ACCAGAACUGCACGCAAGATT Antisense: UCUUGCGUGCAGUUCUGGUTT
<i>INAVA</i> -siRNA	Sense: GCAAGUCUUUGUACCUGAATT Antisense: UUCAGGUACAAAGACUUGCTT
<i>AOX1</i> -siRNA	Sense: GCAGCCAAAUGUGGACUAUTT Antisense: AUAGUCCACAUUUGGCUGCTT

The sequences of siRNAs used for CD24, SOX17, WFDC2, EPCAM, INAVA, BNC1, AOX1, GSDME, REEP1, and HAND2 knockdown are listed in this table .

Supplementary Table 3. List of PCR primer sequences used in mRNA expression analysis.

Gene	Species	Sequence (5'-3')
GAPDH	Homo sapiens	Forward: GGAGCGAGATCCCTCCAAAAT Reverse: GGCTGTTGTCATACTTCTCATGG
CD24	Homo sapiens	Forward: AGAGATAACCCTGCCCCGAGG Reverse: CCCCCAAAAGAAAAGTCCGC
SOX17	Homo sapiens	Forward: CAAGGGCGAGTCCCGTATCC Reverse: CGACTTGCCCAGCATCTTGC
EPCAM	Homo sapiens	Forward: AGCGAGTGAGAACCTACTGGA Reverse: CGCGTTGTGATCTCCTTCTGA
WFDC2	Homo sapiens	Forward: TGTTCCGGCTTACCCTAGTC Reverse: TCCTTATCATTGGGCAGAGAGC
INAVA	Homo sapiens	Forward: GCGGAGTATCCCCTCAAACC Reverse: TTAGGGGGTCCTCTCTGTGC
BNC1	Homo sapiens	Forward: CAGCGGTCGCAGGATGG Reverse: AGCTTACTTAGAGCGTGGGC
AOX1	Homo sapiens	Forward: TCATCTAAGGGTCTGGGAGAGT Reverse: TCCAGGTTTCTCTCTCGGAA
GSDME	Homo sapiens	Forward: CAGCTTACAGGGTGGGTGTC Reverse: GCGCTATCTGGCATTCTGTC
REEP1	Homo sapiens	Forward: GATGGCTGCTTCCAAGGGAC Reverse: TCTTAGGCTGGCCGTGTTTG
HAND2	Homo sapiens	Forward: GCCTCCTGGAAGAAGATCCA Reverse: GCCAAGACACCCTGTAGAGC

The sequences of primers used for CD24, SOX17, WFDC2, EPCAM, INAVA, BNC1, AOX1, GSDME, REEP1, and HAND2 are listed in this table.