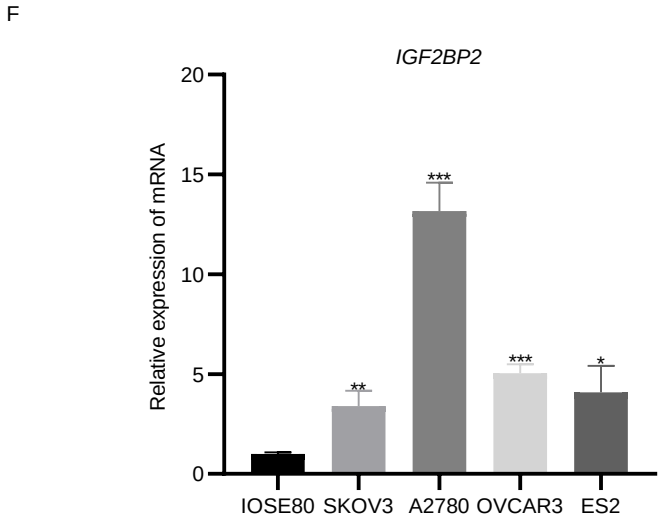
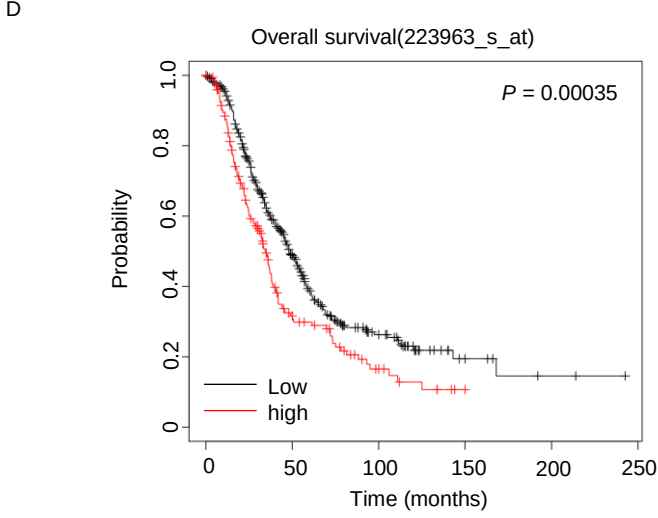
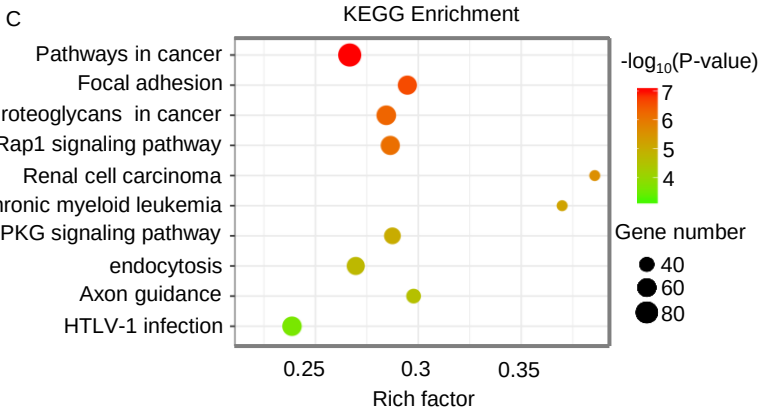
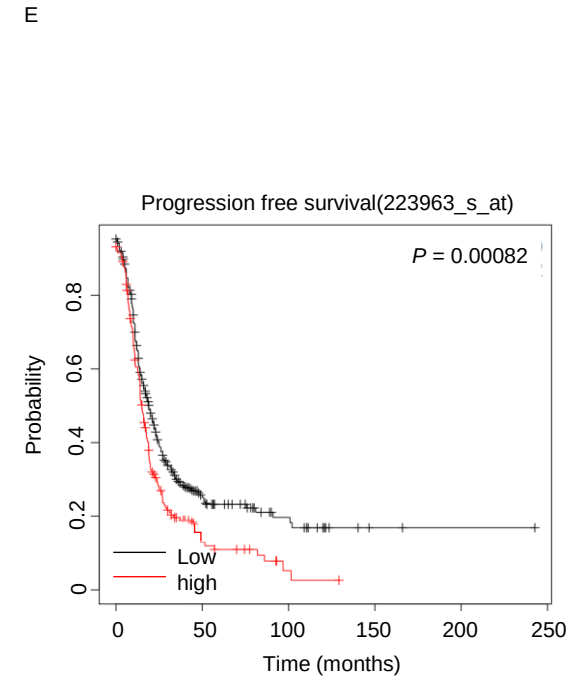
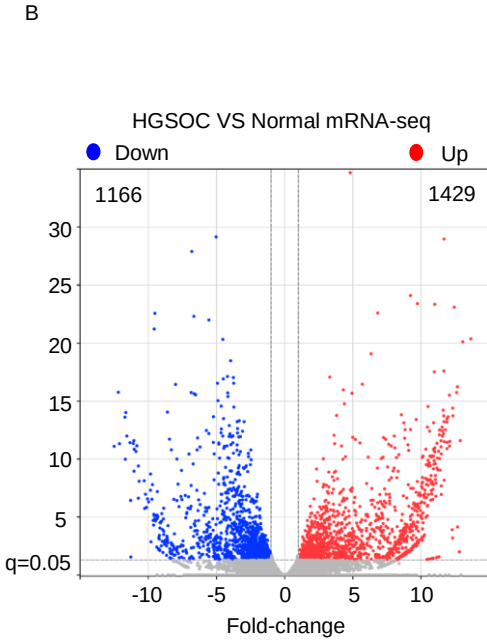
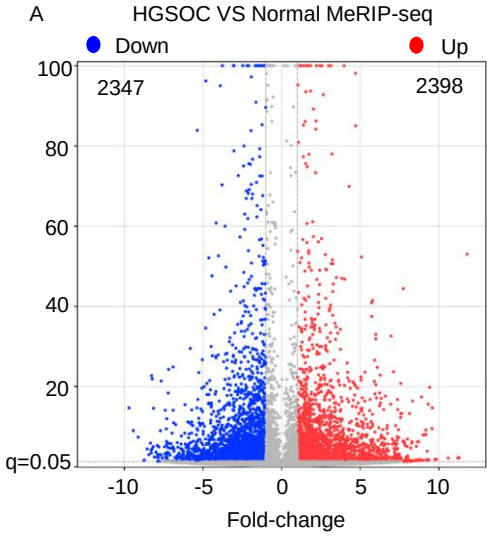
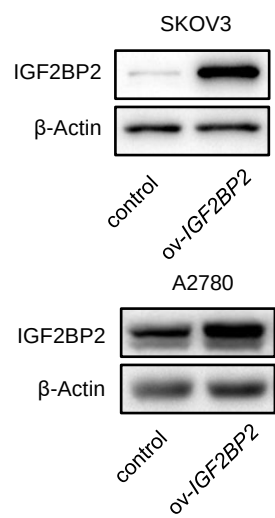
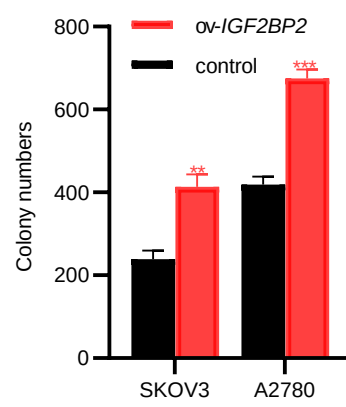
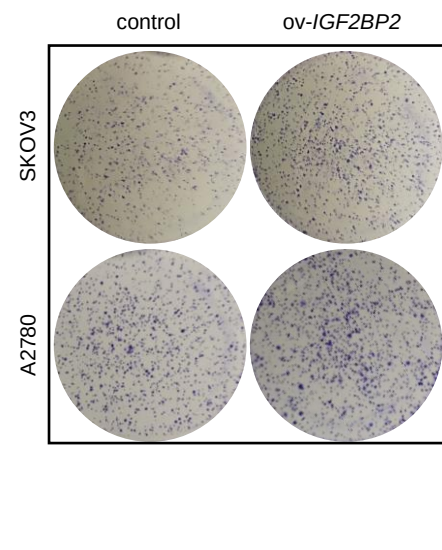


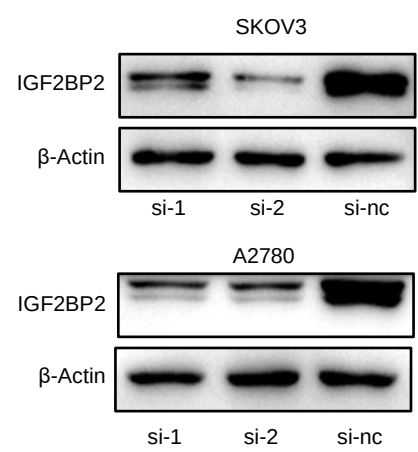
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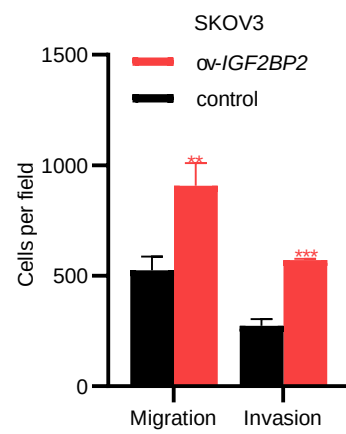
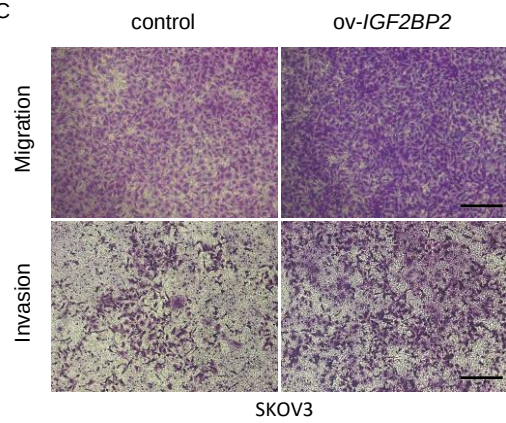
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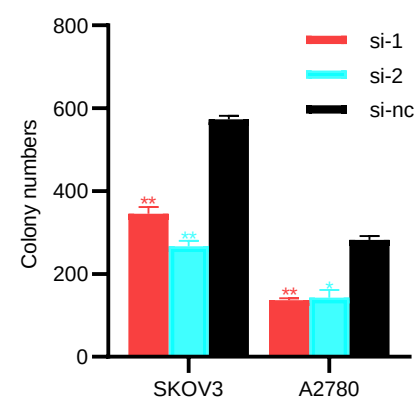
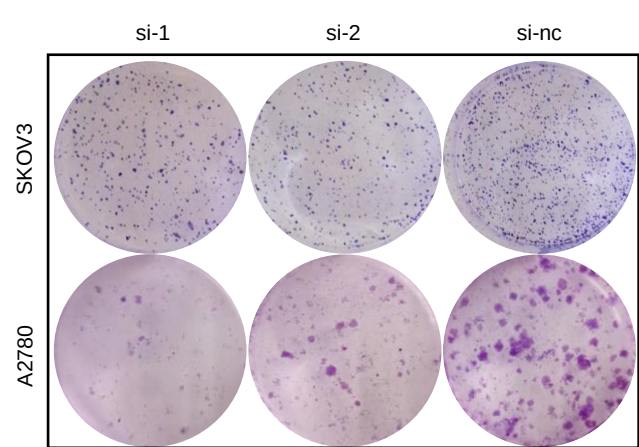
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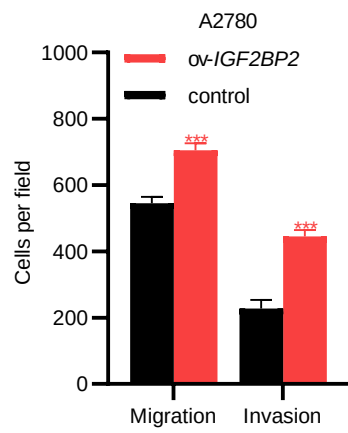
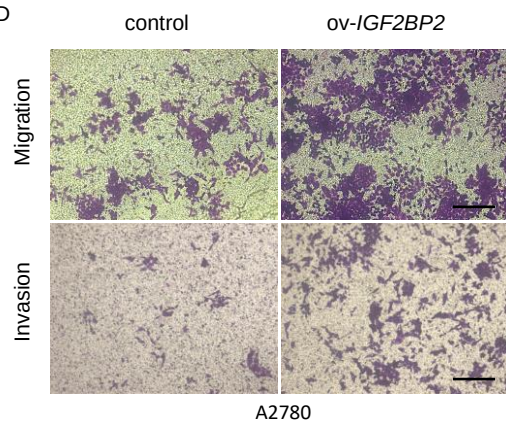
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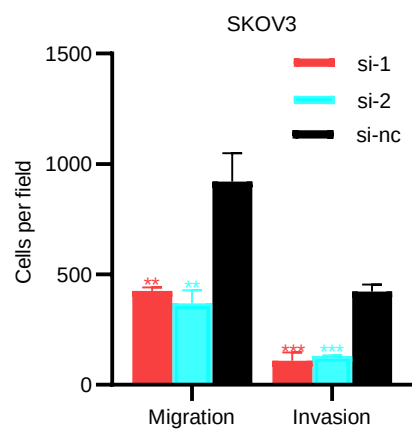
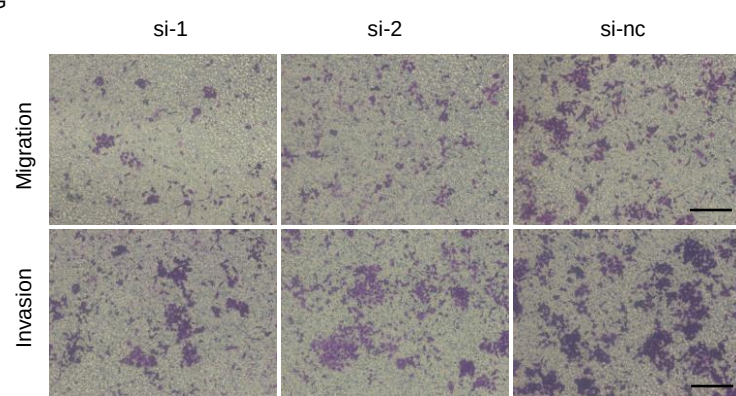
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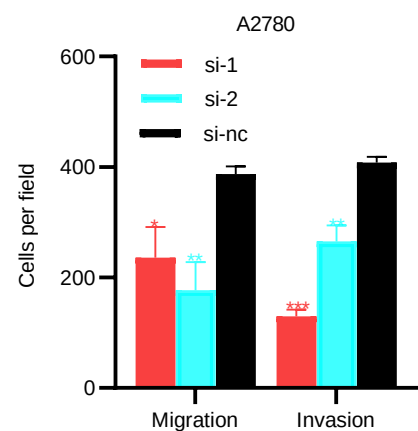
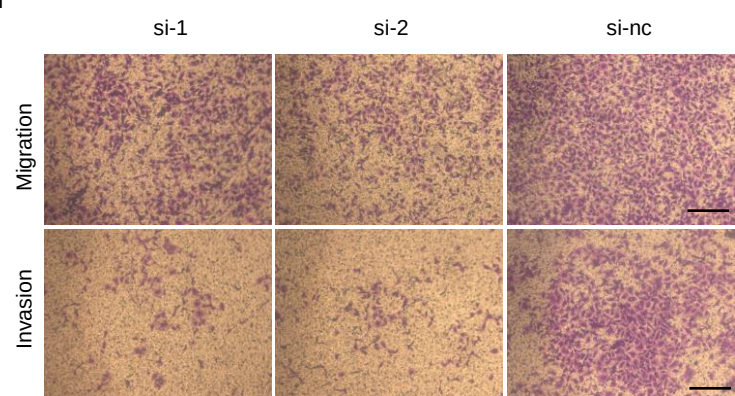
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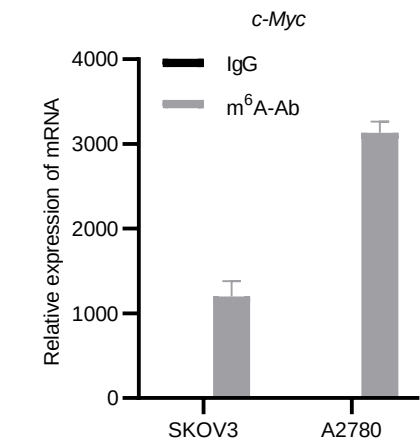
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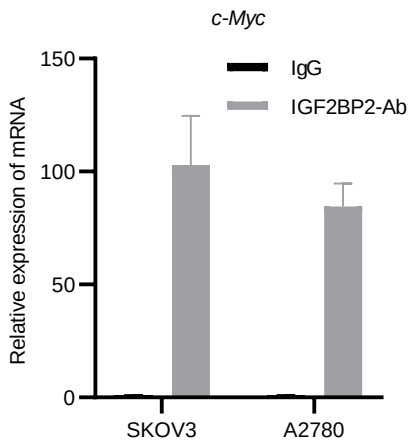
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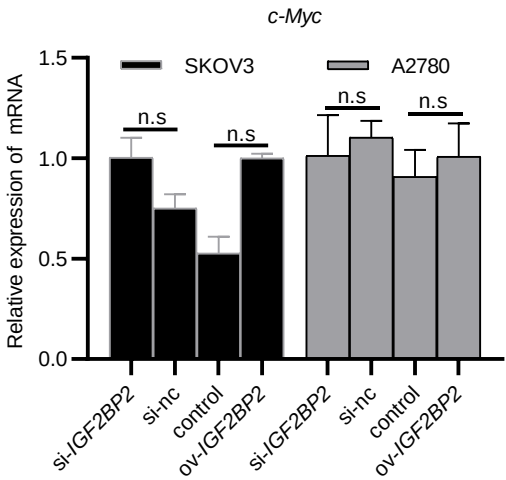
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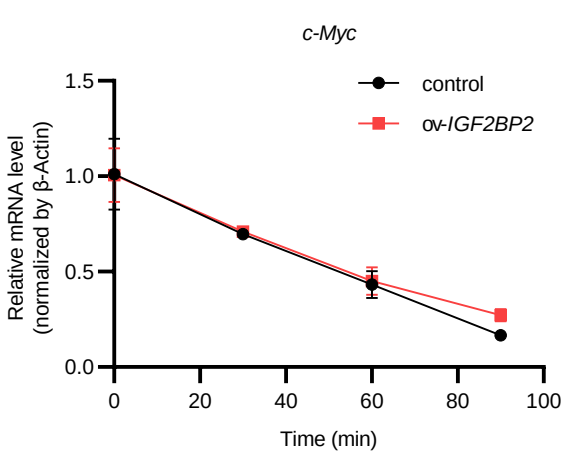
B



C



D



Supplementary Table 1. Clinical and pathological information of ovarian cancer patients for IHC

Number	Age (<54=0, ≥54=1)	FIGO (I~II=0, III~IV=1)	CA125 (<35=0, ≥35=1)	Ki76 (<50=0, ≥50=1)	Histopathologic type (Low=0, High=1)	Peritoneal implantation (No=0, Yes=1)	Lymph node metastasis (No=0, Yes=1)	Distant metastasis (No=0, Yes=1)
1	1	0	1	0	1	0	0	0
2	0	0	1	0	1	0	0	0
3	0	0	1	1	1	0	0	0
4	0	0	0	1	1	0	0	0
5	1	0	1	0	1	0	0	0
6	0	0	1	0	1	0	0	0
7	1	0	1	1	1	0	0	0
8	1	0	1	0	1	0	0	0
9	1	0	0	1	1	0	0	0
10	1	0	0	1	1	0	0	0
11	0	0	1	0	1	0	0	0
12	0	0	0	1	1	0	0	0
13	0	0	1	0	0	0	0	0
14	0	0	0	0	1	0	0	0
15	0	0	0	1	0	0	0	0
16	1	0	1	0	1	0	0	0
17	0	0	0	0	0	0	0	0
18	0	0	0	1	1	0	0	0
19	1	0	1	1	0	0	0	0
20	0	0	0	0	1	0	0	0
21	1	0	1	1	1	1	0	0
22	0	0	0	0	1	0	0	0
23	1	0	1	0	1	0	0	0
24	1	0	1	0	1	1	0	0
25	0	0	1	1	1	1	0	0
26	0	0	1	1	1	0	0	0
27	1	1	1	1	1	1	1	0
28	1	1	1	0	1	1	1	0
29	0	1	1	0	1	1	1	0
30	0	1	1	1	0	1	1	0
31	1	1	1	1	0	0	0	0
32	1	1	1	1	1	1	0	0
33	1	1	1	0	1	1	1	0
34	1	1	1	1	1	1	1	0
35	0	1	1	1	1	1	1	0
36	1	1	1	1	1	1	1	0
37	0	1	1	1	1	1	1	0
38	0	1	1	1	1	1	0	0
39	0	1	1	1	1	1	0	0
40	0	1	1	1	1	1	1	0
41	1	1	1	1	0	1	1	1
42	1	1	1	0	1	1	0	1
43	1	1	1	0	1	1	0	0
44	1	1	1	0	1	1	1	0
45	1	1	1	1	1	1	0	0
46	0	1	0	1	1	1	0	0

Supplementary Table 2. Primers and sequences for qRT-PCR.	
Gene	Sequence
β-Actin-F	5'-TCCCTGGAGAAGAGCTACGA-3'
β-Actin-R	5'-AGCACTGTGTTGGCGTACAG-3'
IGF2BP2-F	5'-AGTGGAATTGCATGGGAAAATCA-3'
IGF2BP2-R	5'-CAACGGCGGTTTCTGTGTC-3'
CKAP2L-F	5'-GAGCCAAAACACCAAGCCTTA-3'
CKAP2L-R	5'-GGAGTTTAATGCTGATGGACCTT-3'
c-Myc-F	5'-TTCGGGTAGTGGAAAACCAG-3'
c-Myc-R	5'-AGTAGAAATACGGCTGCACC-3'
METTL3-F	5'-CAAGCTGCACTTCAGACGAA-3'
METTL3-R	5'-GCTTGGCGTGTGGTCTTT-3'
METTL14-F	5'-GAACACAGAGCTTAAATCCCCA-3'
METTL14-R	5'-TGTCAGCTAAACCTACATCCCTG-3'
ALKBH5-F	5'-CCACCAGCTTTTGGATCACCA-3'
ALKBH5-R	5'-CGGCGAAGGCTACACTTACG-3'
FTO-F	5'-CGAGAGCGCGAAGCTAAGA-3'
FTO-R	5'-GCTGCCACTGCTGATAGAAT-3'
F-Forward; R-Reverse	

Supplementary Figure/Table legends

Figure S1. IGF2BP2 expression is increased in ovarian cancer cell lines, and high expression of IGF2BP2 is associated with the shorter survival of ovarian cancer (OS) patients. (A) Volcano Plots of dysregulated m⁶A peaks in HGSOC comparing with normal ovarian tissues (Normal) ($\log_2FC \geq 1$ or ≤ -1 , $q < 0.05$). (B) Volcano Plots of differentially expressed genes identified in HGSOC comparing with normal ovarian tissues ($\log_2FC \geq 1$ or ≤ -1 , $q < 0.05$). (C) KEGG pathway analysis of genes with differential m⁶A modification. (D-E) Kaplan-Meier survival curves of OS and PFS based on *IGF2BP2* mRNA expression using online Kaplan-Meier Plotter tool. (F) qRT-PCR analysis of *IGF2BP2* mRNA expression in normal ovarian epithelial cell line and ovarian cancer cell lines. (G) Western blotting analysis of *IGF2BP2* protein level in normal ovarian epithelial cell line and ovarian cancer cell lines.

Figure S2. IGF2BP2 promotes ovarian cancer cell proliferation, invasion and migration *in vitro*. (A) Western blotting analysis of the overexpression efficiency of IGF2BP2 after transfection of IGF2BP2-overexpressing vector and control vector. (B-D) The ability of colony formation, migration and invasion of SKOV3 and A2780 cells after IGF2BP2 overexpressing. (E) Western blotting analysis of IGF2BP2 knockdown efficiency in SKOV3 and A2780 cells. (F-H) The ability of colony formation, migration and invasion of A2780 and SKOV3 cells after knocking down of IGF2BP2.

Figure S3. Overexpression of IGF2BP2 does not affect the RNA stability and mRNA expression of *c-Myc* in ovarian cancer cells. (A) m⁶A modification of *c-Myc* mRNA in SKOV3 and A2780 cells. (B) The interaction between IGF2BP2 and *c-Myc* mRNA. (C) mRNA expression of *c-Myc* in *IGF2BP2*-overexpressing or knocking down SKOV3 and A2780 cells. (D) RNA stability of *c-Myc* mRNA upon *IGF2BP2*-overexpressing.

Supplementary table 1. Clinical and pathological information of ovarian cancer patients for IHC.

Supplementary table 2. Primers sequences for qRT-PCR.