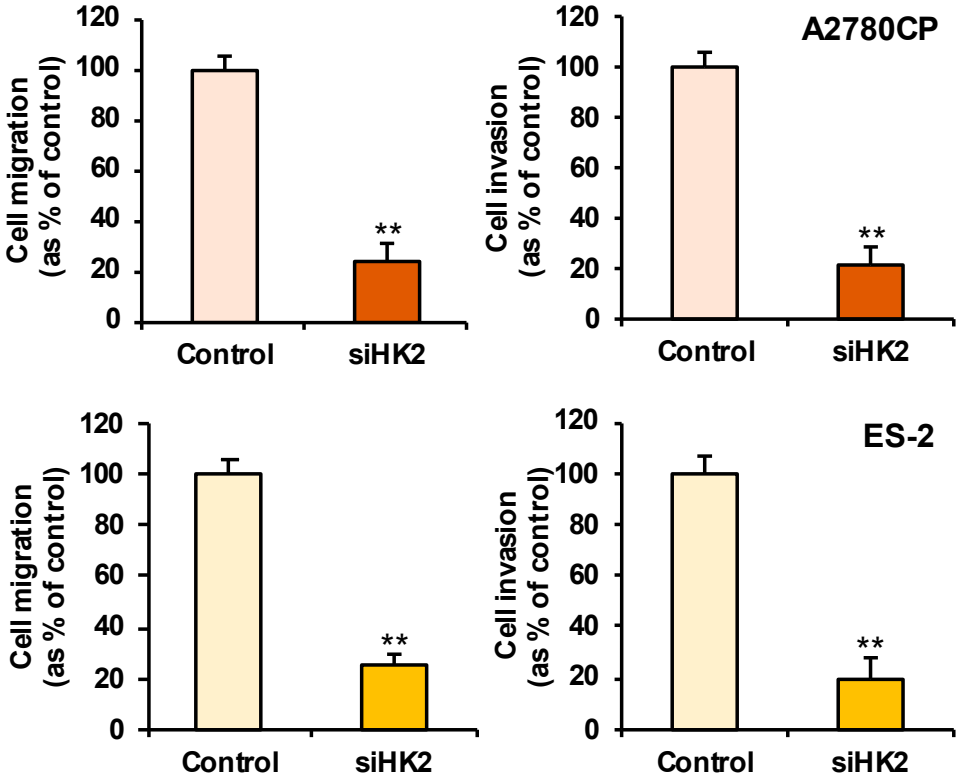
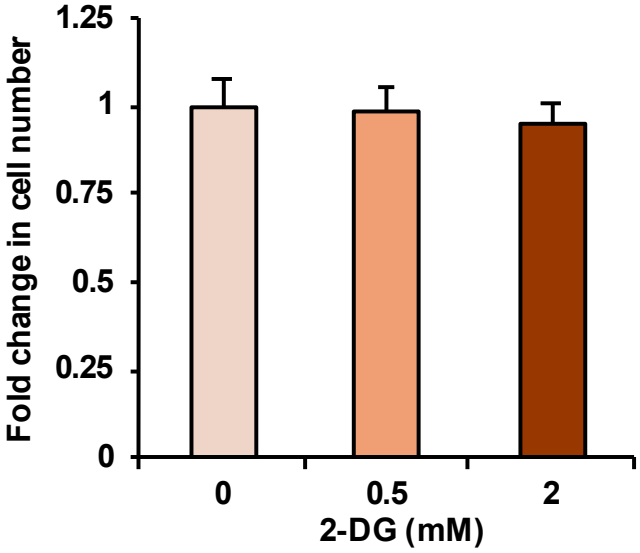
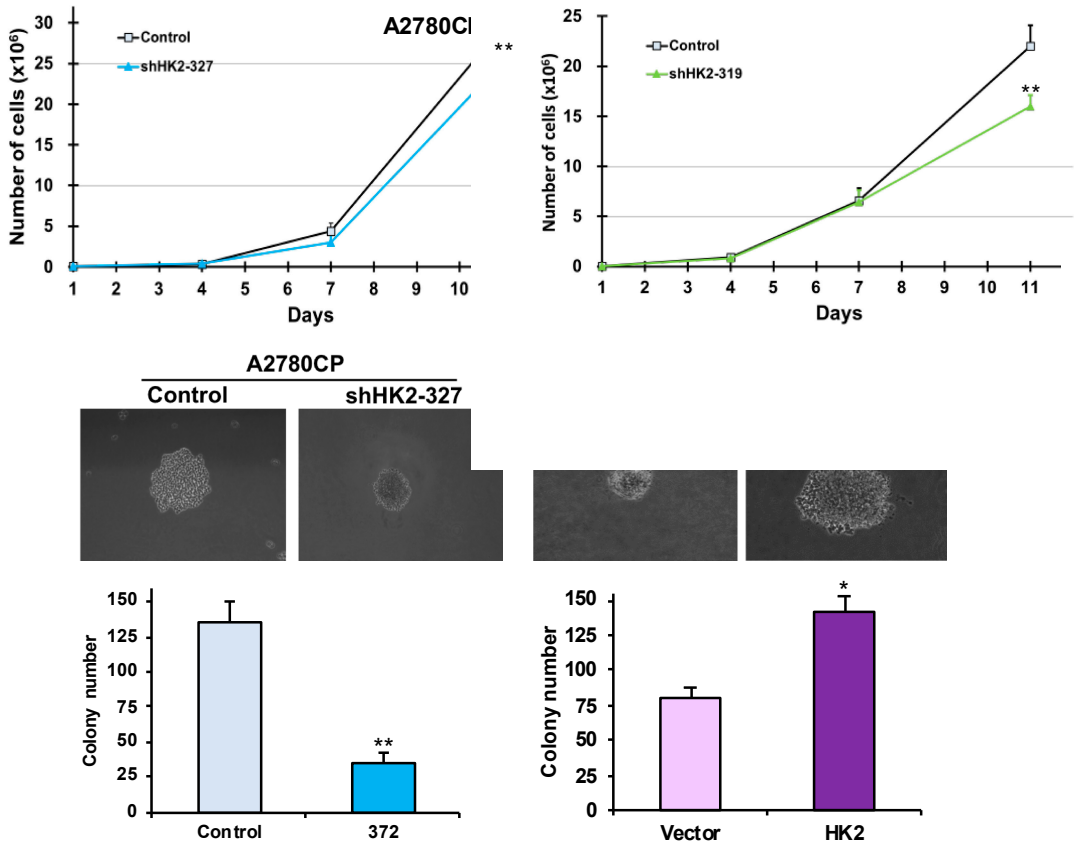
Supplementary Figure S1 Migration or invasion of A2780CP and ES-2 cells with transient knockdown of HK2 (siHK2) presented as a percentage of controls; n=3; **, P<0.005.



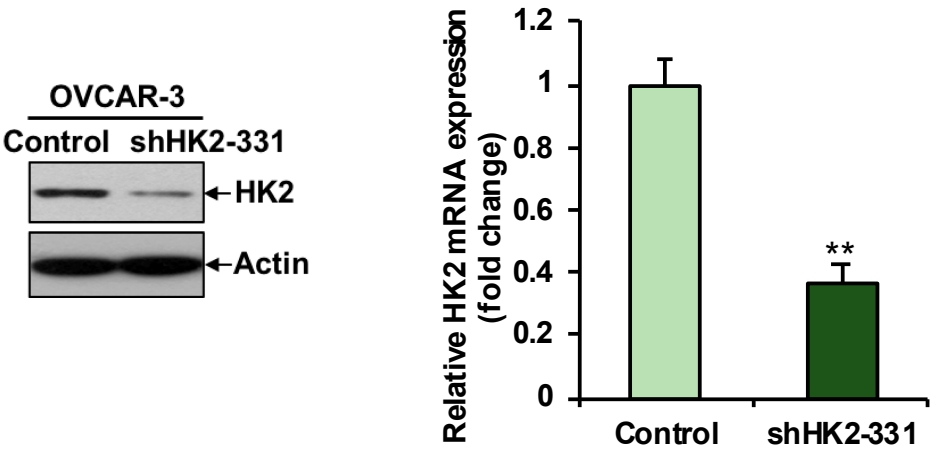
Supplementary Figure S2 Cell proliferation rate of A2780CP cells treated with 2-DG presented as fold change by XTT assay. n=3.



Supplementary Figure S3 (A) Cell proliferation rate of A2780CP (left) and ES-2 (right) cells in control and shHK2 conditions, assessed by cell counting; n=3; **, P<0.005. (B) Soft agar assay in control and stable knockdown of HK2 in A2780CP cells (left), and stable overexpression of HK2 in SKOV-3 cells (right); n=3; *, P<0.05; **, P<0.005. Representative images of colonies formed (upper panel).



Supplementary Figure S4 Stable knockdown of HK2 (shHK2) mRNA and protein expression in OVCAR-3 as determined by qPCR (left) and immunoblot analysis (right) respectively.



Supplementary Table S1. Primary antibodies used for immunohistochemistry, immunoblotting and neutralization.

Target Protein	Animal source *	Catalog #	Usage **	Working dilution	Vendor
HK2	Rabbit	2867	IHC	1:100	Cell Signaling
			IB	1:1000	
DDK	Mouse	TA50011	IB	1:2000	Origene
p-FAK	Rabbit	8556	IB	1:1000	Cell Signaling
FAK	Rabbit	sc-558	IB	1:200	Santa Cruz biotechnology
p-ERK1/2	Rabbit	9101	IB	1:1000	Cell Signaling
ERK1/2	Rabbit	9102	IB	1:1000	Cell Signaling
MMP9	Mouse	IM09L	IB	2 µg/ml	Calbiochem
			N	2 µg/ml	
uPA	Mouse	AB3689	IB	1:1000	American Diagnostica
CD117	Rabbit	3074	IB	1:1000	Cell Signaling
NANOG	Rabbit	4903	IB	1:1000	Cell Signaling
SOX9	Rabbit	82630	IB	1:1000	Cell Signaling
IL-6	Mouse	MAB206	N	2 µg/ml	R&D
IL-6R	Mouse	MAB227	N	2 µg/ml	R&D
IL-8	Mouse	MAB208	N	2 µg/ml	R&D
IL-8R	Mouse	MAB330	N	2 µg/ml	R&D
Actin	Mouse	ab6276	IB	1:50000	Abcam

* Antibodies prepared in corresponding host animals. ** IHC: immunohistochemistry; IB: immunoblotting; N: neutralization.

Supplementary Table S2. Primers used for qPCR.

Gene	Primer direction	Primer Sequence (5′ to 3′)
HK2	Forward	CAAAGTGACAGTGGGTGTGG
	Reverse	GCCAGGTCCTTCACTGTCTC
MMP9	Forward	CCTCTGGAGGTTCGACGTGA
	Reverse	TAGGCTTTCTCTCGGTACTGGAA
uPA	Forward	TCACCACCAAAATGCTGTGT
	Reverse	AGGCCATTCTCTTCCTTGGT
VEGF	Forward	CCTTGCTGCTCTACCTCCAC
	Reverse	ATCTGCATGGTGATGTTGGA
NANOG	Forward	CCATCCTTGCAAATGTCTTCTG
	Reverse	CTTTGGGACTGGTGGAAGAATC
OCT4	Forward	GTGGAGGAAGCTGACAACAATG
	Reverse	AATTCTCCAGGTTGCCTCTCACT
KLF4	Forward	GTCTTGAGGAAGTGCTGAGC
	Reverse	ATCGTCTTCCCCTCTTTGGC
SOX9	Forward	GTACCCGCACTTGCACAAC
	Reverse	TCTCGCTCTCGTTCAGAAGTC
CD117	Forward	GGCAGCCAGAAATATCCTCCTTAC
	Reverse	TACCACGGGCTTCTGTCGGTTGG
SOX2	Forward	GTGGTTACCTCTTCCTCCCACT
	Reverse	AGTGCTGGGACATGTGAAGTCT
GAPDH	Forward	TCCATGACAACTTTGGTATCGTG
	Reverse	ACAGTCTTCTGGGTGGCAGTG

Supplementary Table S3. Correlation of HK2 histoscore with clinicopathological parameters in ovarian cancer.

Characteristics	Case (n)	HK2 (histoscore)	
		Mean ± SD	p-value
Diagnostic categories			
Benign	6	1.17 ±1.472	
Carcinomas	45	3.91±3.147	0.039†
Stage (FIGO)			
I	19	4.05 ±2.505	
II	6	2.33±2.338	
III	14	3.36 ±3.973	
IV	6	6.33±2.658	0.116*
I-III	39	3.54±3.077	
IV	6	6.33±2.658	0.042†
Histological grade (FIGO)			
1	4	2.25±2.872	
2	13	2.77±2.351	
3	25	4.80±3.317	0.122*
1-2	17	2.65±2.396	
3	25	4.80±3.317	0.043†
Histology			
Serous	18	4.94±3.686	
Clear Cell	5	4.20±2.775	
Mucinous	4	2.50±3.000	
Endometrioid	17	2.82±2.270	0.291*
Serous	18	4.94±3.686	
Non-serous	26	3.04±2.441	0.092†
Chemosensitivity§			
Sensitive	34	3.94±2.828	
Resistant	7	3.71±3.861	0.819†

† Mann-Whitney test; * Kruskal–Wallis rank test; §Chemosensitive-patients remained disease free more than 6 months after completion of first-line chemotherapy. Those with significant P-values are underlined.

Supplementary Table S4. Cox regression analysis for factors affecting overall and disease-free survival.

Prognostic factor	Overall survival			Disease-free survival		
	P	Hazard Ratio	95% Confidence Interval	*P*	Hazard Ratio	95% Confidence Interval
HK2 histoscore	0.123	2.998	0.743-12.094	0.033	4.483	1.128-17.809
Disease stage	0.033	8.197	1.184-56.747	0.076	4.774	0.851-26.795
Grade	0.622	1.860	0.157-21.995	0.910	1.138	0.121-10.700
Histotype	0.935	0.892	0.058-13.841	0.467	0.383	0.029-5.092