Supplementary Tables

Supplementary Table S1. Combination treatment reduces the IC_{50} values for alisertib and paclitaxel

Drug(s)	Molar Ratio	Concentration (nM ± SE)	
		IC_{30}	IC_{50}
Alisertib	--	67 ± 7	315 ± 91
Alisertib:paclitaxel	40:1	22 ± 2	48 ± 4
	16:1	18 ± 2	35 ± 4
Paclitaxel	--	2.3 ± 0.3	4 ± 0.6
Alisertib:paclitaxel	40:1	0.5 ± 0.1	1.2 ± 0.1
	16:1	1.1 ± 0.1	2.2 ± 0.2

Supplementary Table S2. Effect of single-agent and combination therapy on mitotic cell population

Treatment	Mean number of $pHisH3^{Ser10+}$ cells per field ± SE	*P*
vehicle	1.1 ± 0.088	--
20 mg/kg alisertib	1.1 ± 0.096	0.7046
30 mg/kg M alisertib	0.98 ± 0.056	0.2590
5 mg/kg paclitaxel	0.82 ± 0.049	0.0084
20 mg/kg alisertib + paclitaxel	0.92 ± 0.060	0.0933

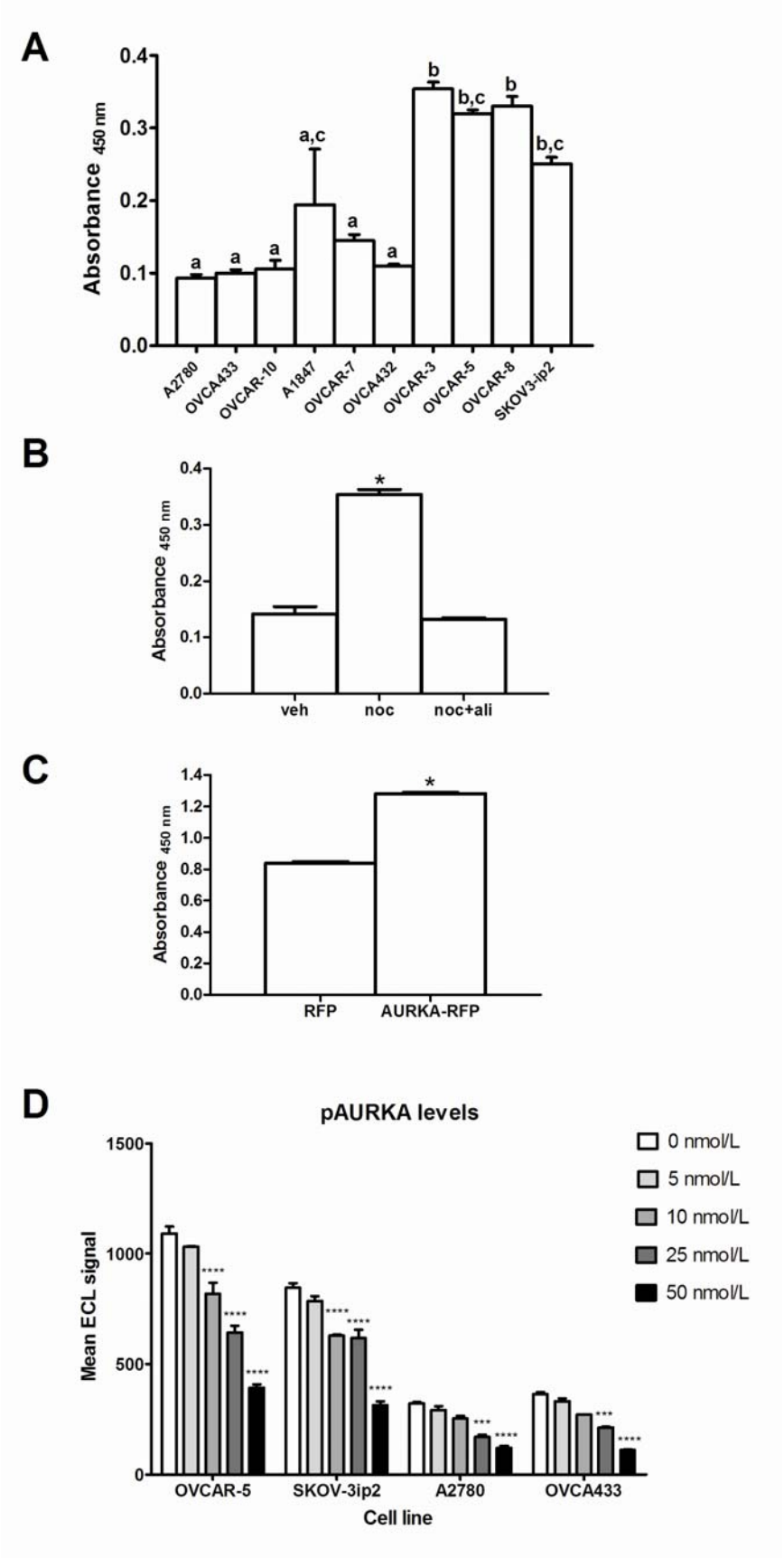

A
Absorbance 450 nm
0.4
0.3
0.2
0.1
0.0
a
a
a
a,c
a
a
b
b,c
b
b,c
A2780
OVCA433
OVCAR-10
A1847
OVCAR-7
OVCA432
OVCAR-3
OVCAR-5
OVCAR-8
SKOV3-ip2
B
Absorbance 450 nm
0.4
0.3
0.2
0.1
0.0
*
veh
noc
noc+ali
C
Absorbance 450 nm
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
*
RFP
AURKA-RFP
D
pAURKA levels
Mean ECL signal
1500
1000
500
0
0 nmol/L
5 nmol/L
10 nmol/L
25 nmol/L
50 nmol/L
****
***
OVCAR-5
SKOV-3ip2
A2780
OVCA433
Cell line

Figure S1. A) pAURKA^{T288} levels detected by ELISA in EOC cell lines. Data was analyzed using a one-way ANOVA followed by Tukey's multiple comparison tests. Bars labeled with different letters are statistically significant ($P < 0.05$). Bars labeled with the same letter (e.g., "a") are not significantly different. B) Increased pAURKA^{T288} levels ($^{*}P<0.05$) in OVCAR-3 cells treated with Nocodazole compared to vehicle; concomitant treatment with alisertib (ali, 60 nmol/L) blocked the effect. C) Increased pAURKA^{T288} levels (HEK293 cells) after transient transfection of *AURKA-RFP* compared to *RFP* control ($^{*}P<0.05$). D) pAURKA^{T288} levels detected by electrochemiluminescent ELISA in EOC cell lines treated with increasing doses of alisertib (0, 5, 10, 25 and 50 nmol/L) showed a dose-dependent decrease in pAURKA^{T288}. Data was analyzed using a two-way ANOVA followed by Bonferroni post-tests. Bars labeled with asterisks are significantly different from untreated cells ($^{***}P < 0.001$ and $^{****}P < 0.0001$).

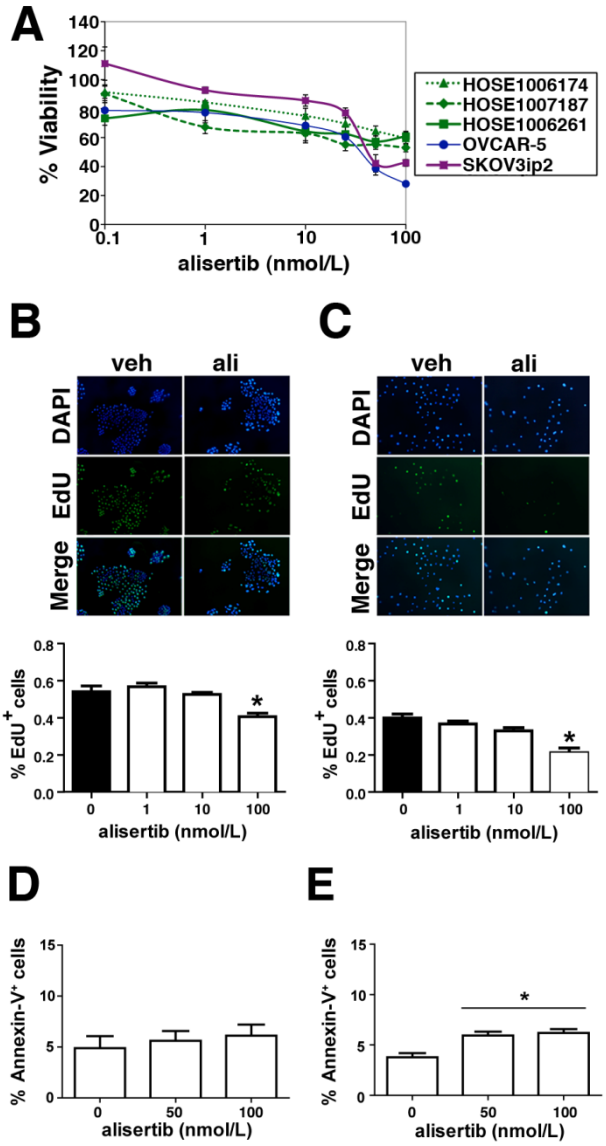


Figure S2. A) Effects of alisertib on proliferation of primary HOSE, OVCAR-5, and SKOV3ip2 cells. EdU incorporation in OVCAR-5 (B) and SKOV3ip2 (C) cells treated with alisertib for 48 h. Annexin V+ cells in OVCAR-5 (D) and SKOV3ip2 cells (E) after alisertib treatment (**P*<0.01).

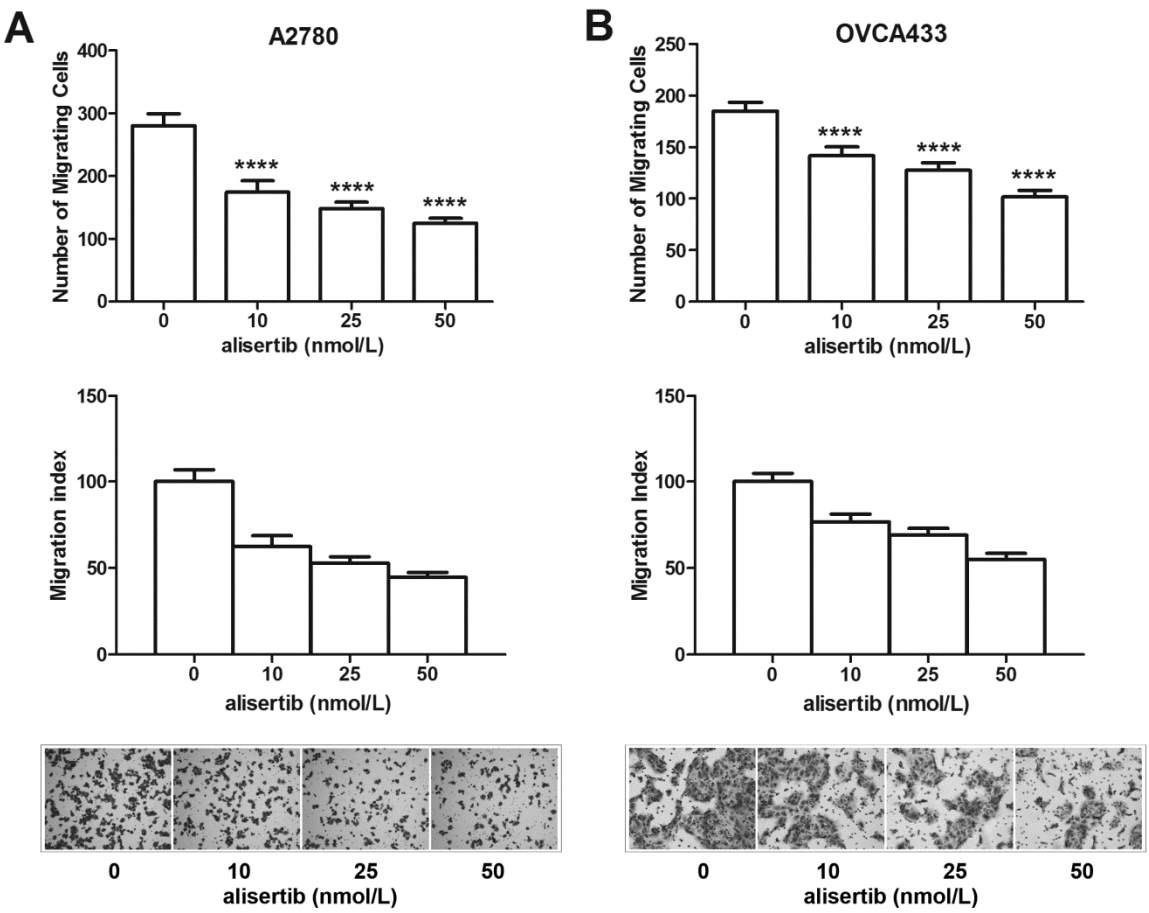
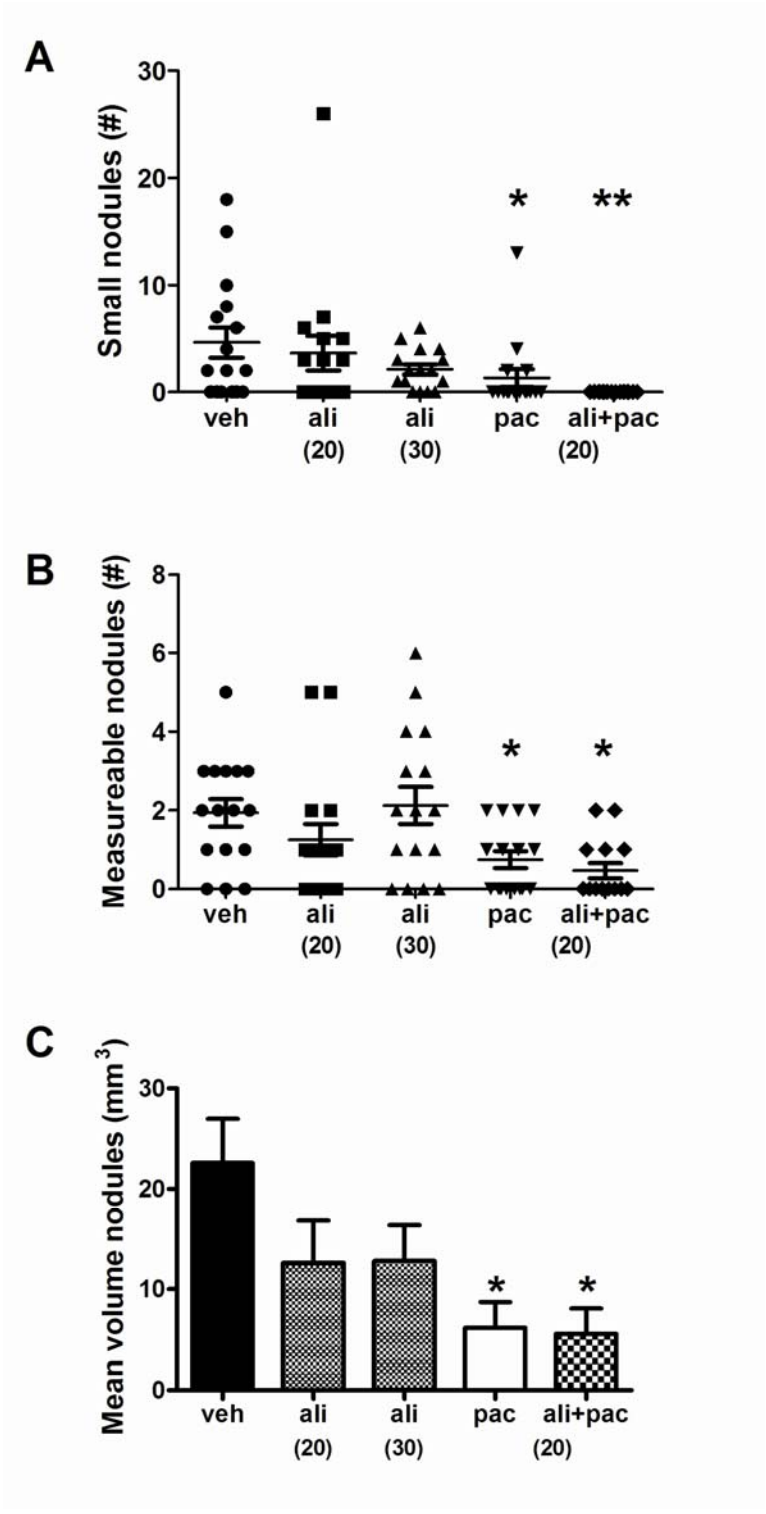
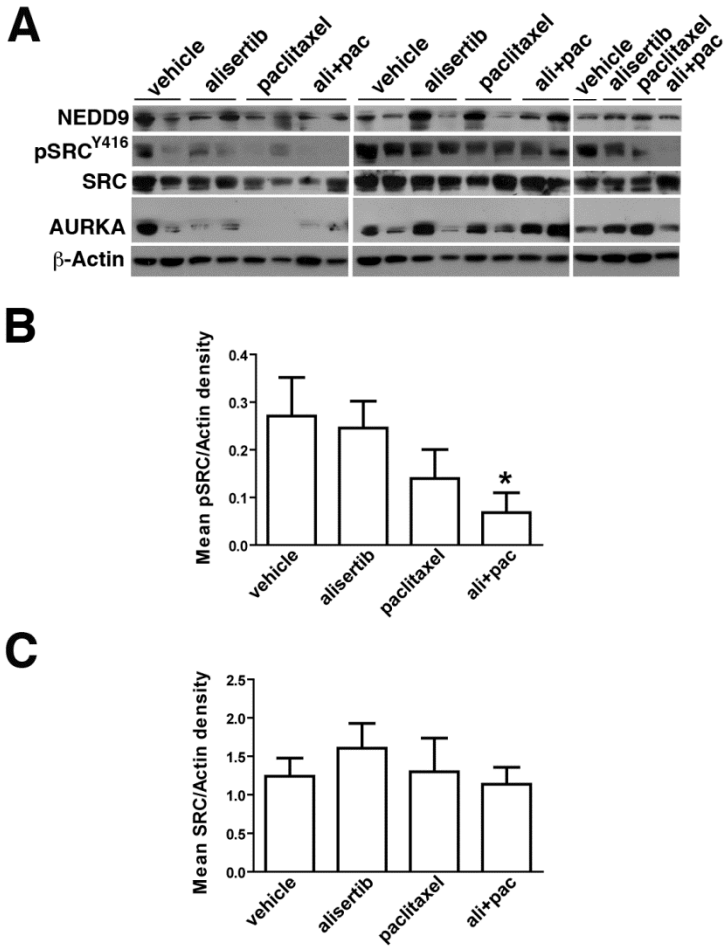


Figure S3. Figure 2. RNAi-mediated silencing of *AURKA* inhibits ovarian carcinoma cell migration. A2780 (A) and OVCA433 (B) cells were transiently transfected with non-targeting scrambled (SCR) *AURKA*-specific siRNAs (si-28 and si-29) for 48 h, and then subjected to migration assays. Bright-field images (10X) of migrating cells from representative inserts are shown. Quantification of migration for OVCAR-5 (A) and SKOV3ip2 (B) is depicted in the top graphs as the mean number of migrating cells ± SE (n = 3). Bars labeled with asterisks are statistically significant (****$P < 0.0001$) as analyzed by one-way ANOVA Kruskal-Wallace test followed by Dunn's multiple comparison test and Mann-Whitney tests comparing individual columns. The migration index is depicted in the bottom graphs as the means relative to SCR siRNA-transfected cells ± SE.



Supplementary Figure S4. Mean number and volume of tumor nodules. A) Number of small (<1 mm^3) tumor nodules. B) Number of measurable (>1 mm^3) tumor nodules. C) The mean volume of tumor nodules. Groups labeled with asterisks are statistically significant from vehicle control (*$P < 0.05$ and **$P < 0.01$).



Supplementary Figure S5. A) Total proteins were immunoblotted for NEDD9, $pSRC^{Y416}$, total SRC, total AURKA and β-Actin. Relative levels of $pSRC^{Y416}$ to β-Actin (B) and total SRC to β-Actin (C) were quantified by gel densitometry. ($P < 0.05$).