



































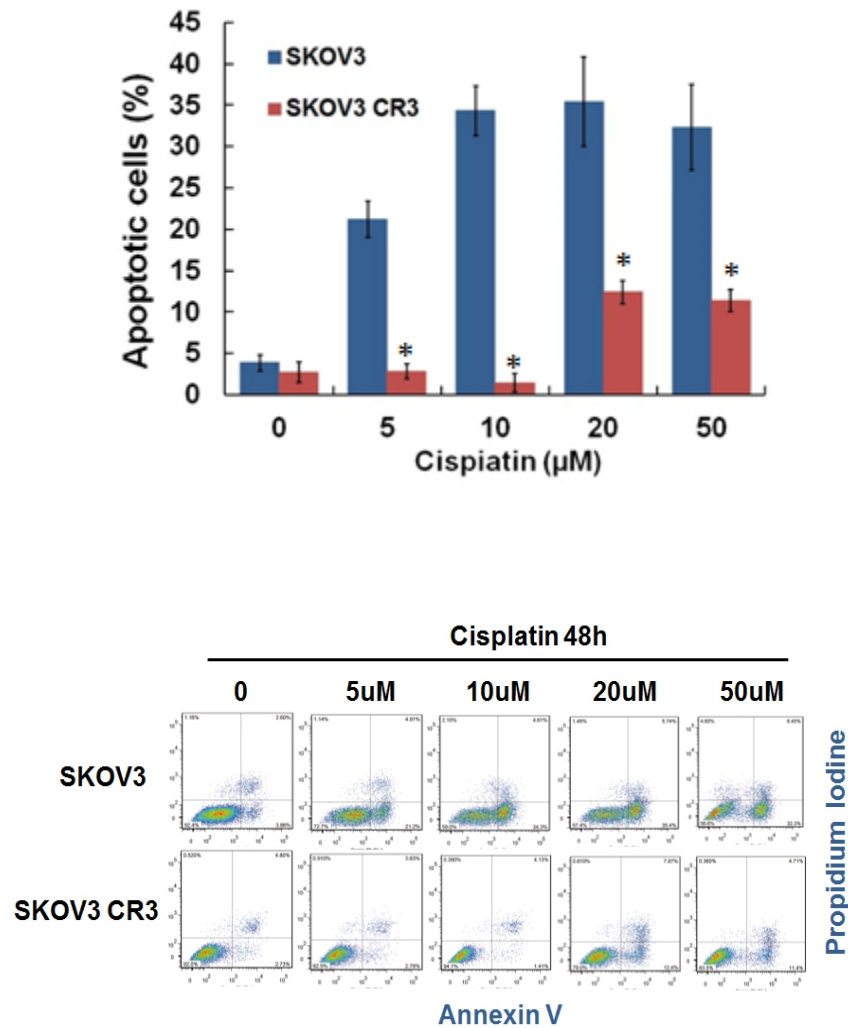




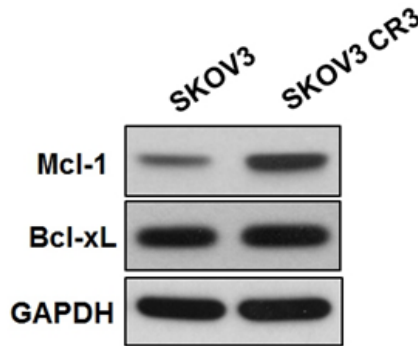
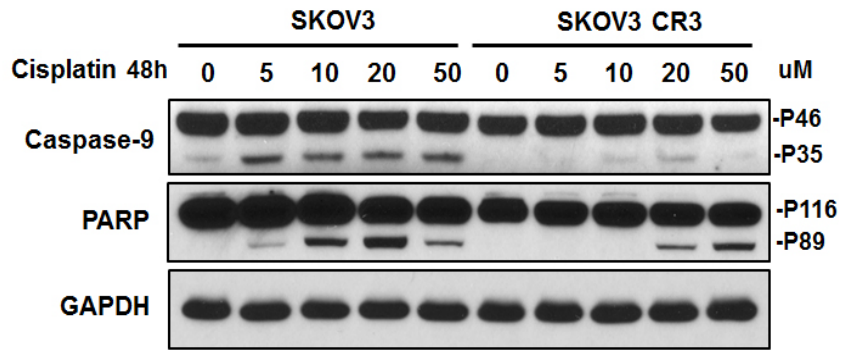




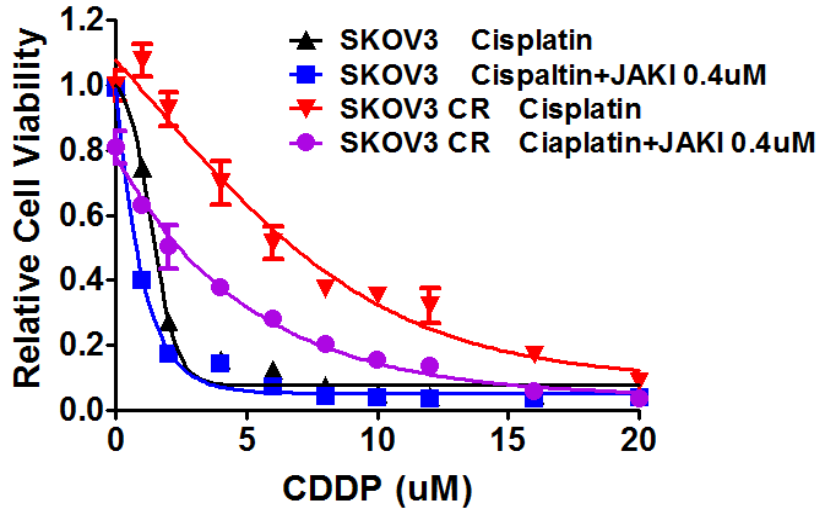
**Figure2.** Apoptotic assay of SKOV3 cell line treated by cisplatin. Both parental and resistant cell line of SKOV3 were treated by cisplatin for apoptosis signaling pathway activation. FACS analysis of apoptosis signaling pathway activation was performed. Resistant cell line had a lower apoptosis rate than parental cell line. \*P < 0.05, SKOV3 parental was compared with SKOV3 CR3.



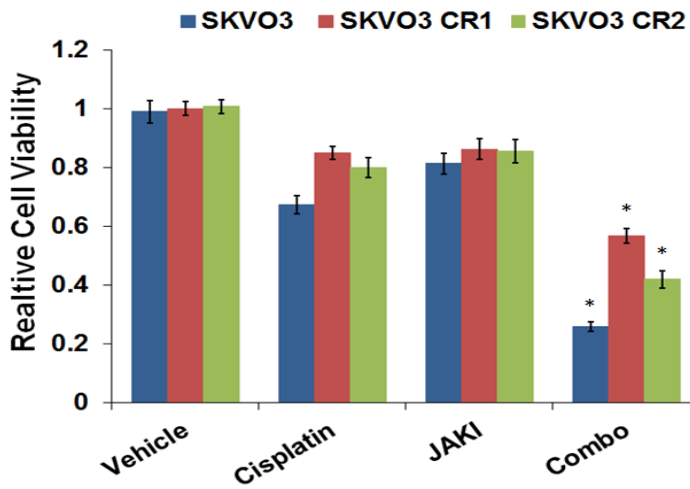
**Figure2.** Western blot analysis of apoptosis signaling pathway activation was performed.



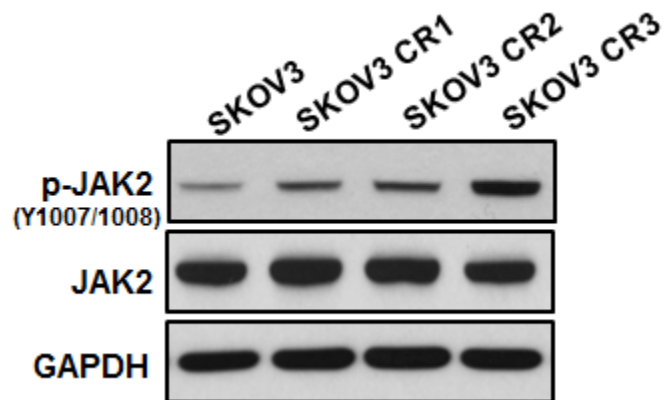
**Figure3.** Synergistic effect of cisplatin combined with JAKI. SKOV3 parental and resistant cells were treated by cisplatin and JAKI for synergistic effects confirmation through SRB assay. \*P < 0.05, SKOV3 parental was compared with SKOV3 CR3.



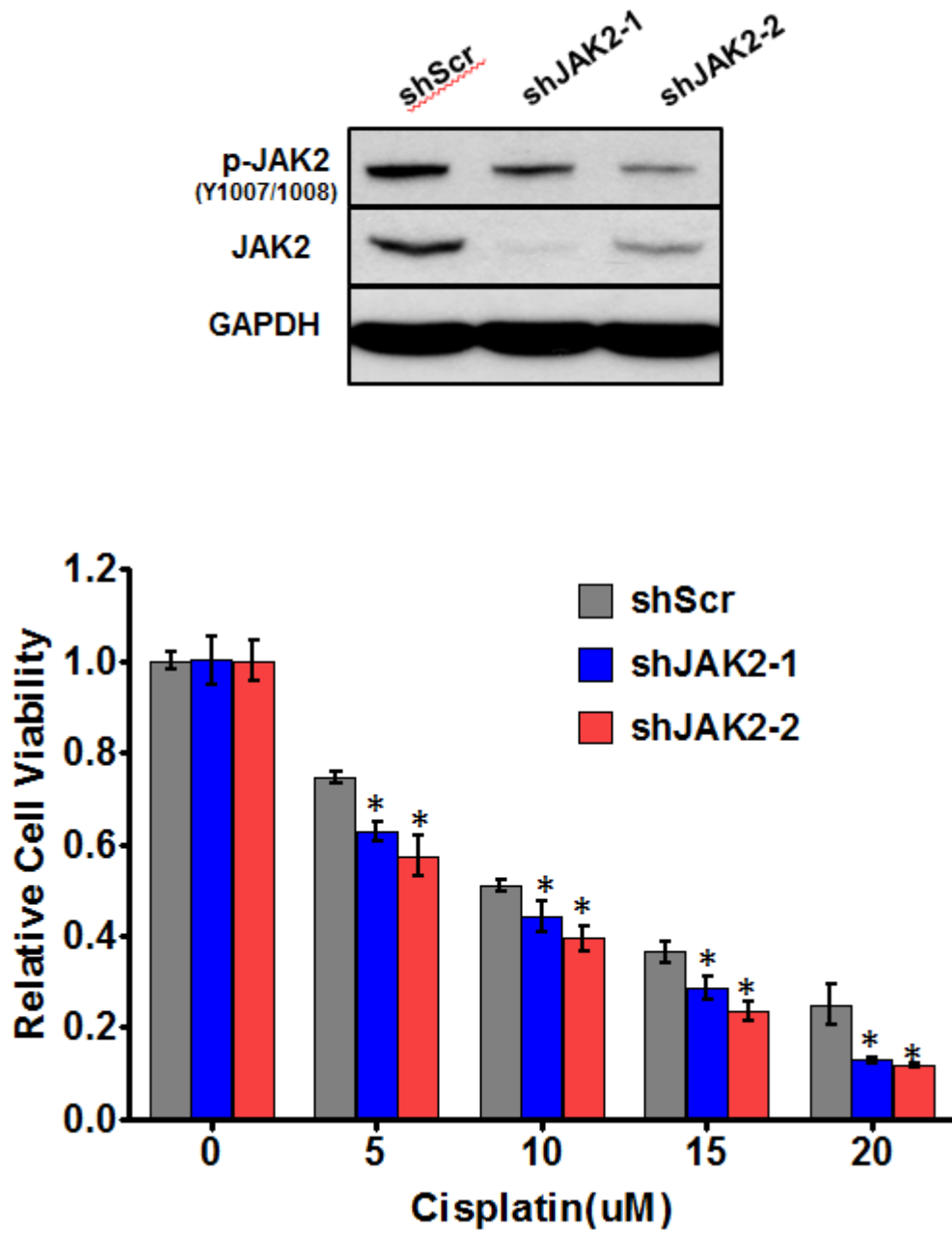
SKOV3 WT Median CI = 0.86  
 SKOV3 CR3 Median CI = 0.65



**Figure4.** The activity of JAK2. JAK2 activation in SKOV3 parental and resistant cell lines was tested through western blot.

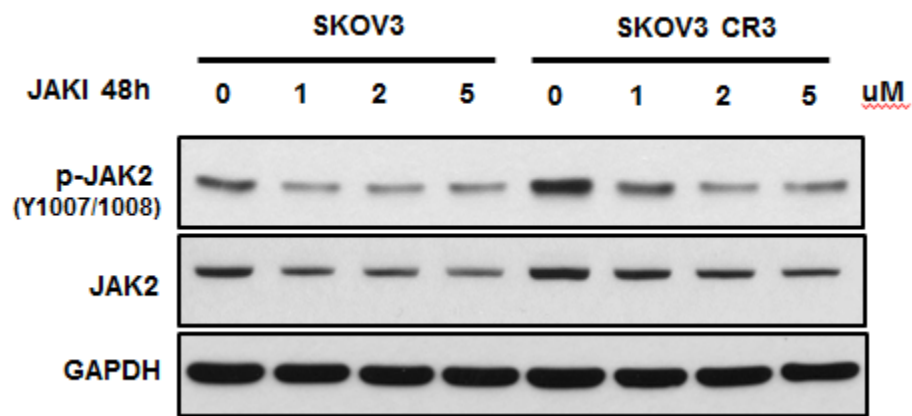


**Figure 5.** shRNA depletion of SKOV3 CR3. shRNA was confirmed to deplete JAK2 through western blot. shRNA depleted cells were treated by cisplatin for sensitivity test. JAK2 expression is related to resistance to cisplatin. \*P < 0.05, shScr was compared with shJAK2.

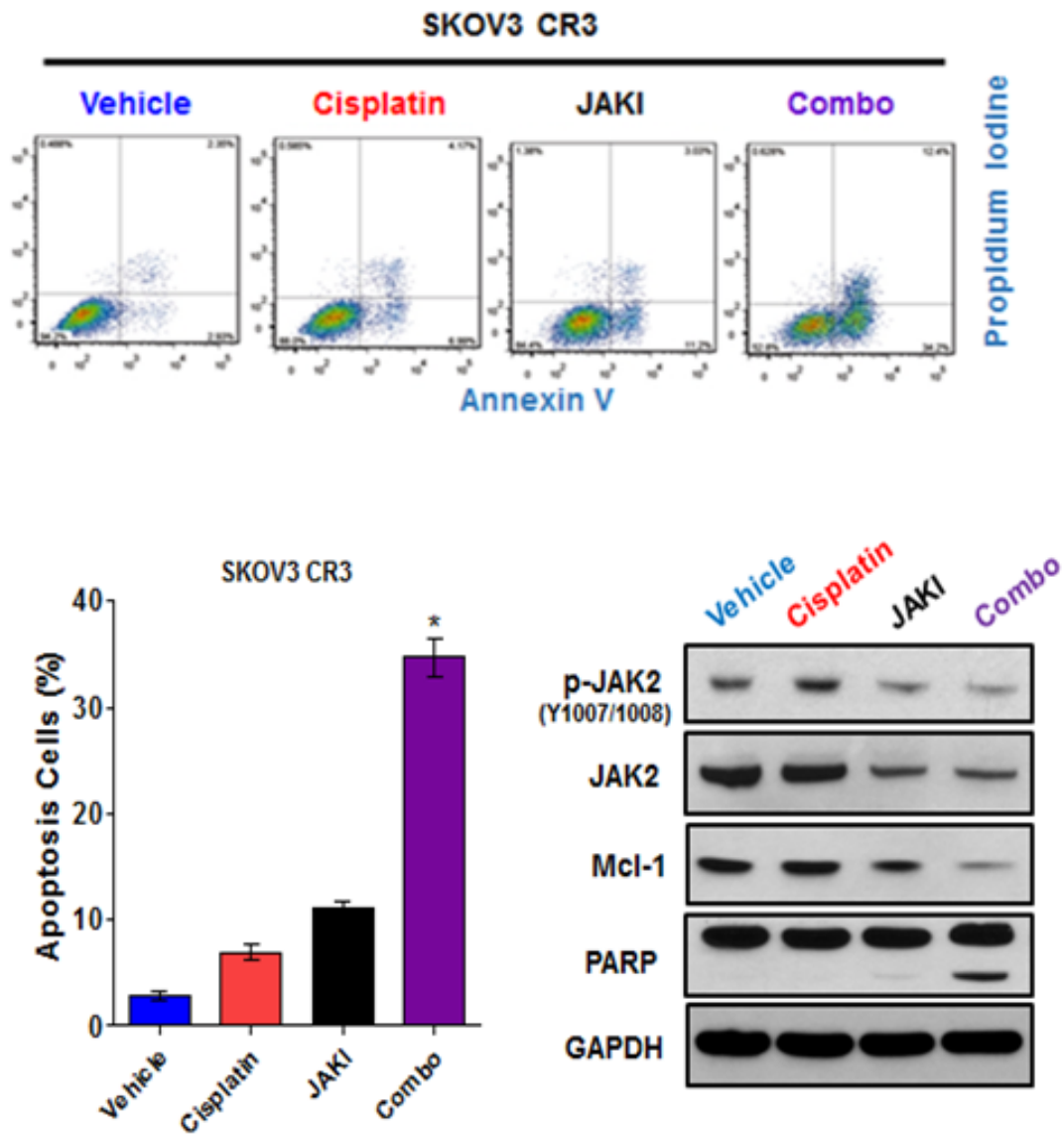




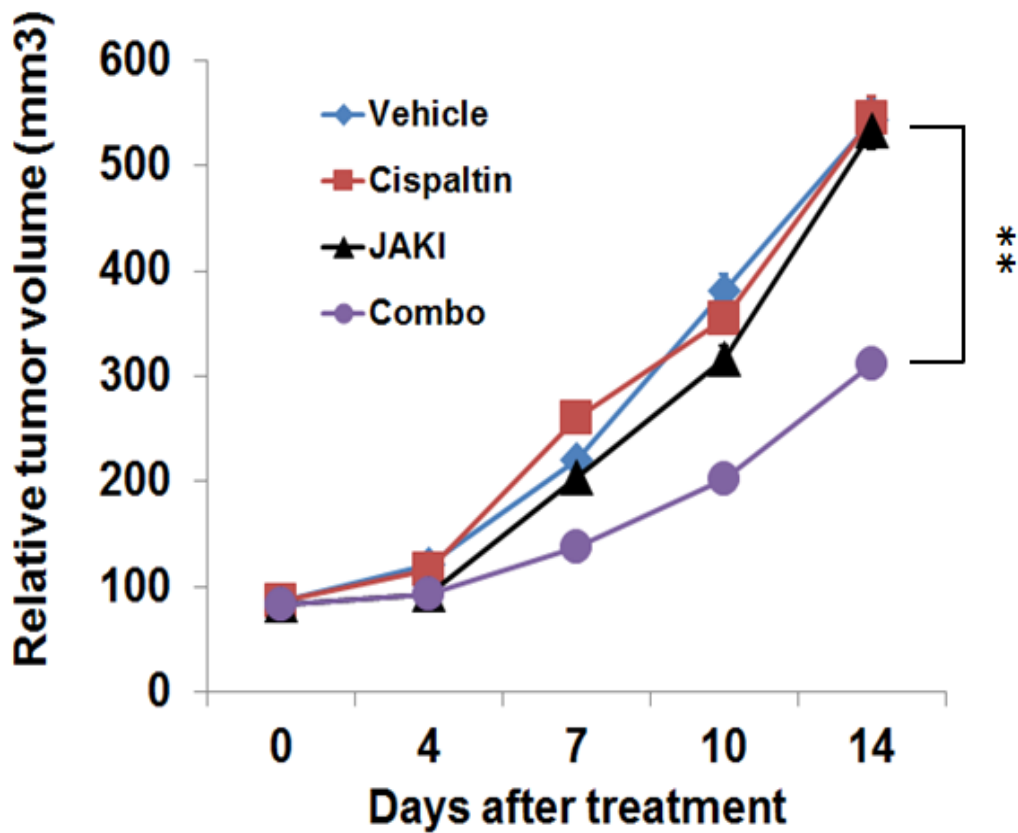
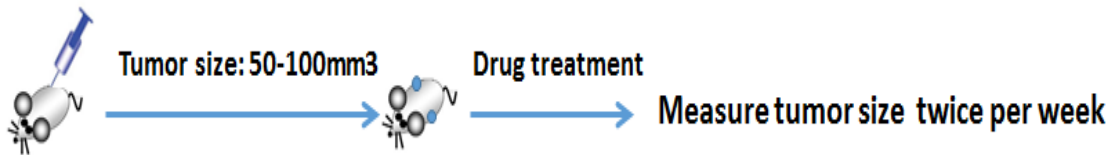
**Figure6.** Specific function of JAKI. SKOV3 sensitive and resistant cell were treated by JAKI for 48 h checking JAK2 activation. JAKI can inhibit JAK2 activation both in resistant and parental cells.



**Figure 7.** Apoptotic assay of SKOV3 CR3 cells. SKOV3 CR3 was treated by cisplatin and JAKI combo group. Samples were collected for FACS analysis and western blot, confirming the activation of apoptosis pathway. Combo group can increase cell apoptosis rate and decrease level of phosphorylated JAK2, MCL1 and PARP. \*P < 0.05, single treatment was compared with combo treatment.



**Figure 8.** Animal experiment. Animal experiment was used to confirm that the combination of cisplatin and JAKI can overcome cisplatin resistance *in vivo*. \*\*P < 0.01, single treatment was compared with combo treatment.



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