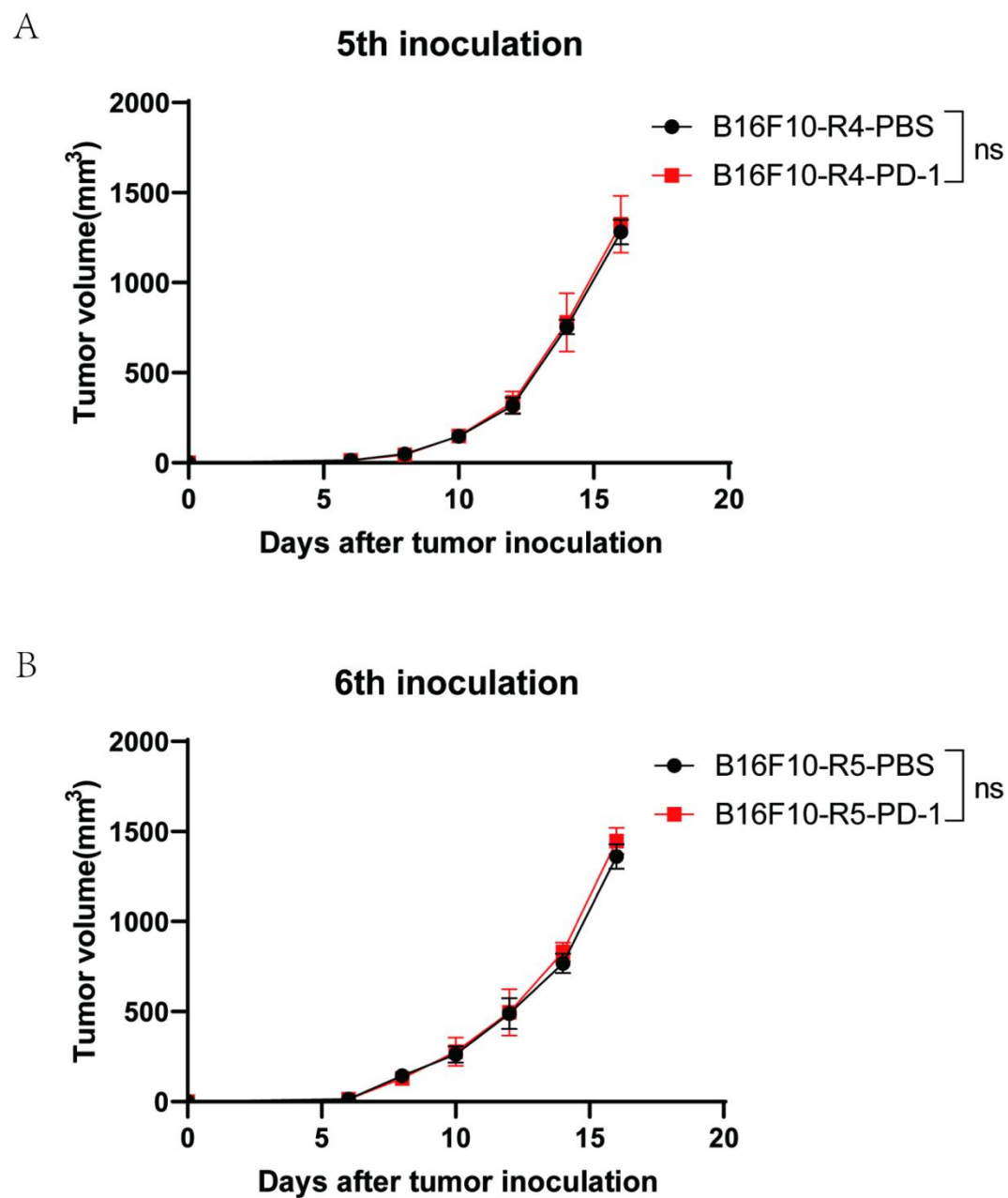
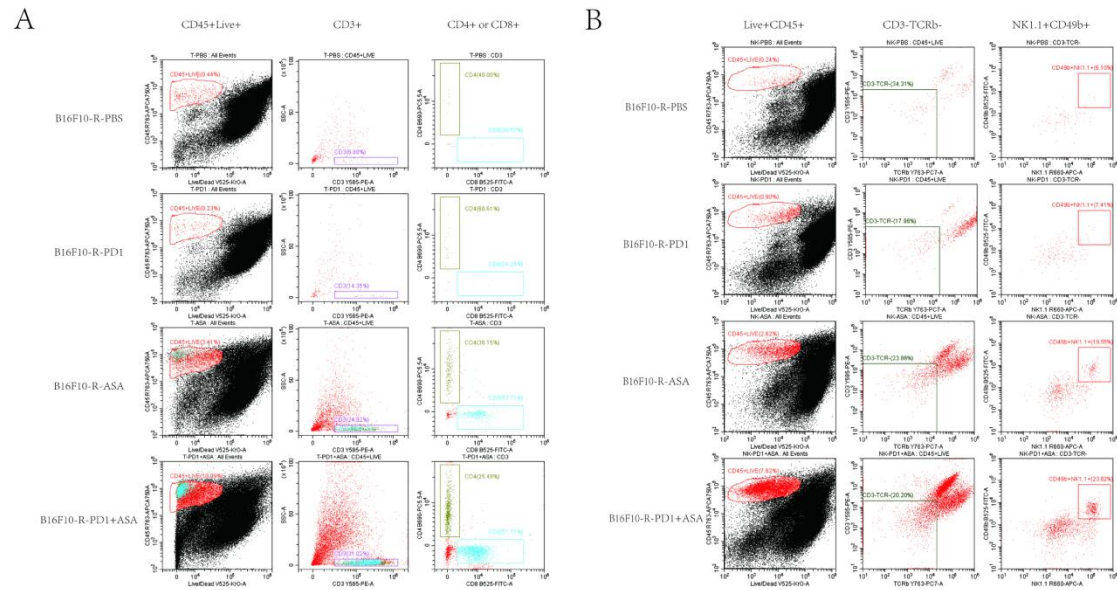


## Supplementary Materials



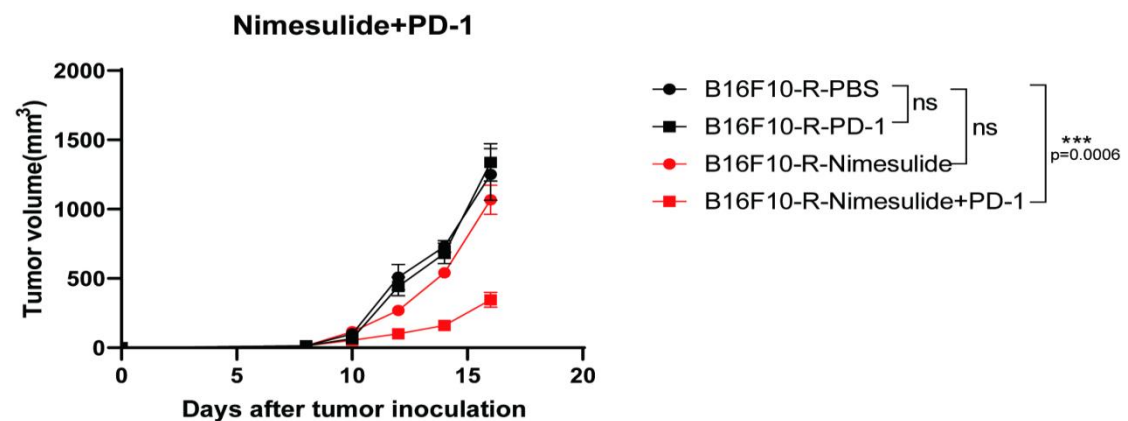
**Figure S1. Construction of B16F10 tumour model resistant to anti-PD-1 therapy.**

(A-B) Tumour growth curves for rounds five and rounds six of anti-PD-1 resistant B16F10 tumour selection(n = 6/group, two-way ANOVA test, Sidak).

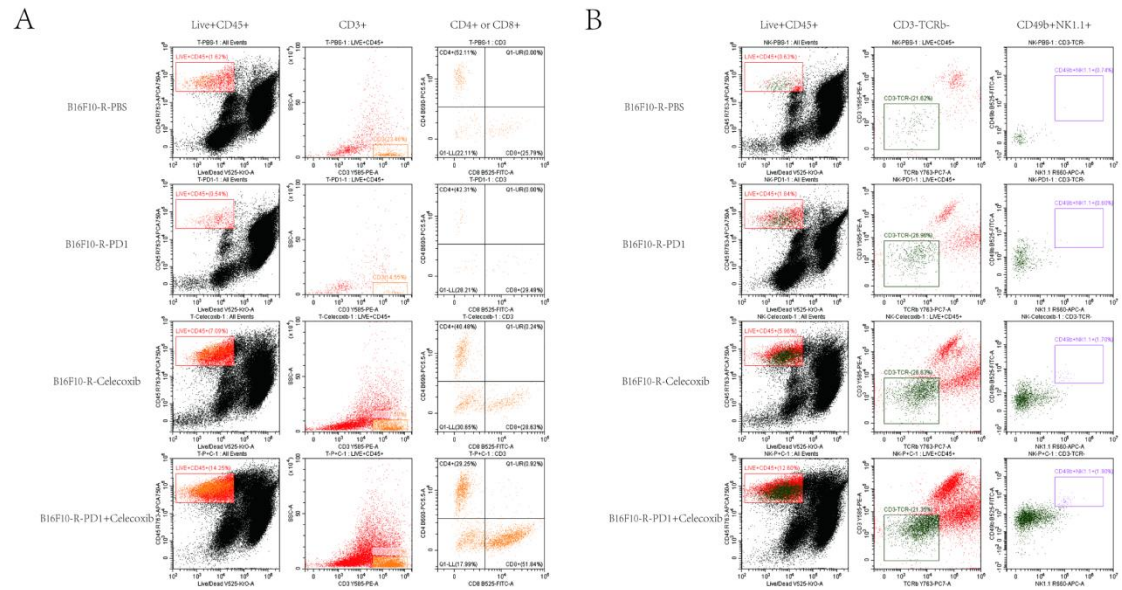


**Figure S2. Flow scatter diagrams of lymphocyte infiltration in B16F10-R tumours treated with ASA.**

(A) Flow scatter diagram of T cell infiltration. (B) Flow scatter diagram of NK cell infiltration.

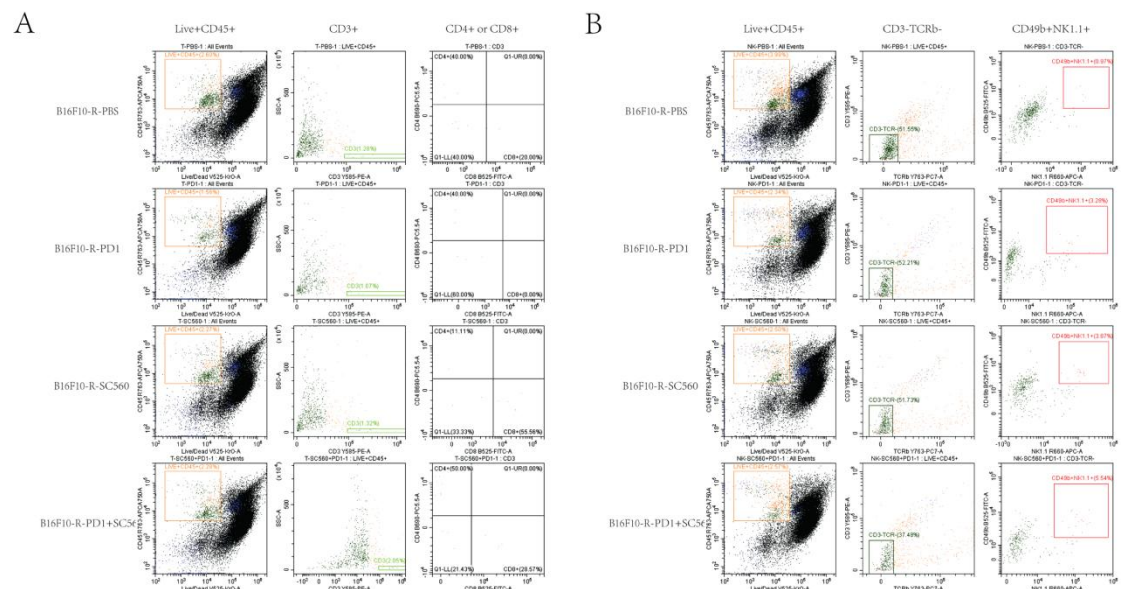


**Figure S3. Tumour growth curves of B16F10-R tumour in vivo treated with pembrolizumab, nimesulide or PBS (n = 6–8/group, two-way ANOVA test, Tukey).**



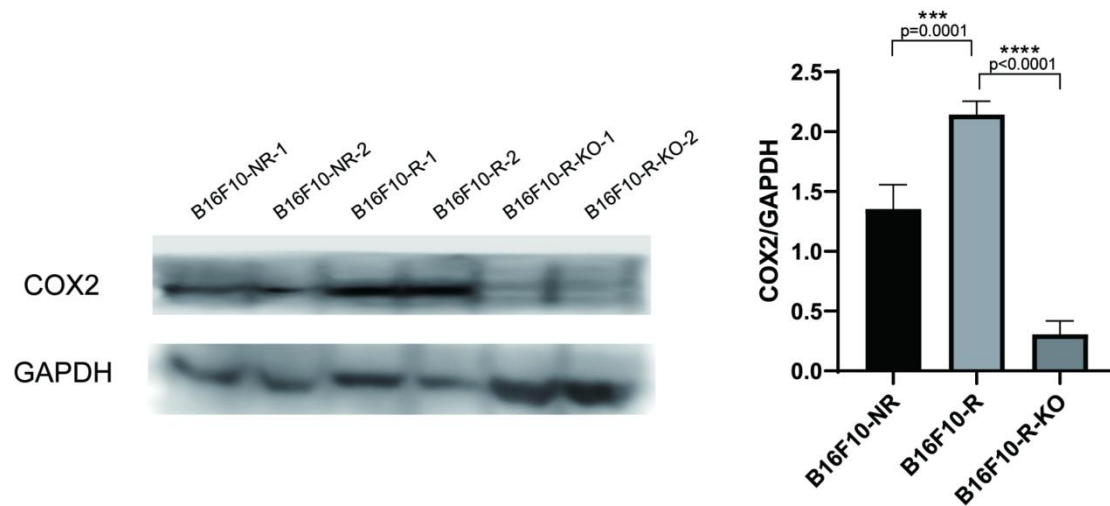
**Figure S4. Flow scatter diagrams of lymphocyte infiltration in B16F10-R tumours treated with CXB.**

(A) Flow scatter diagram of T cell infiltration. (B) Flow scatter diagram of NK cell infiltration.

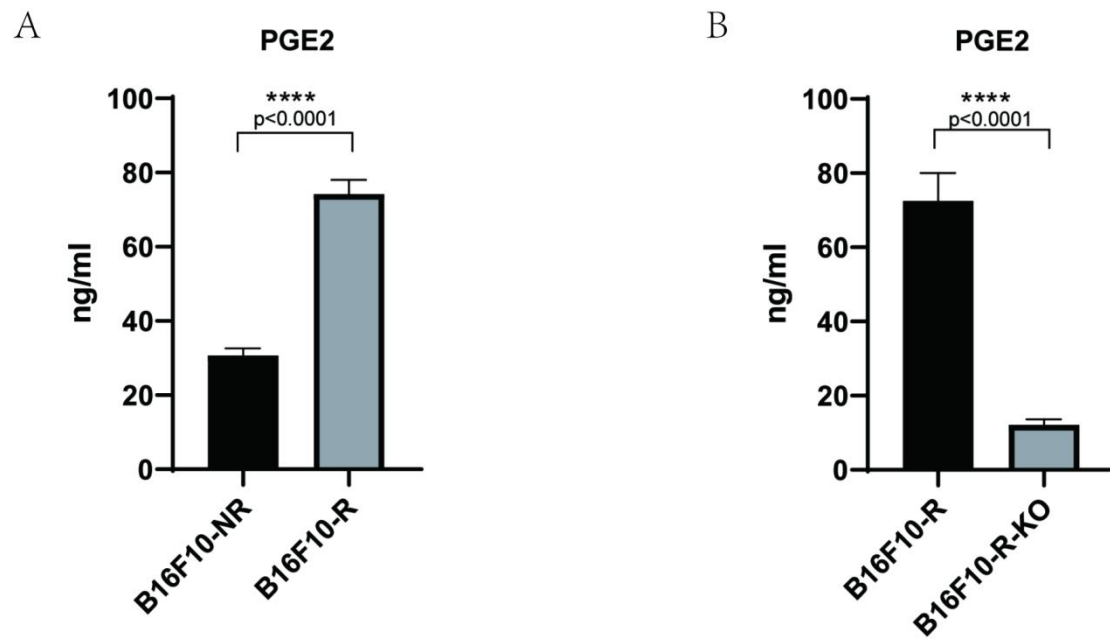


**Figure S5. Flow scatter diagrams of lymphocyte infiltration in B16F10-R tumours treated with SC560.**

(A) Flow scatter diagram of T cell infiltration. (B) Flow scatter diagram of NK cell infiltration.



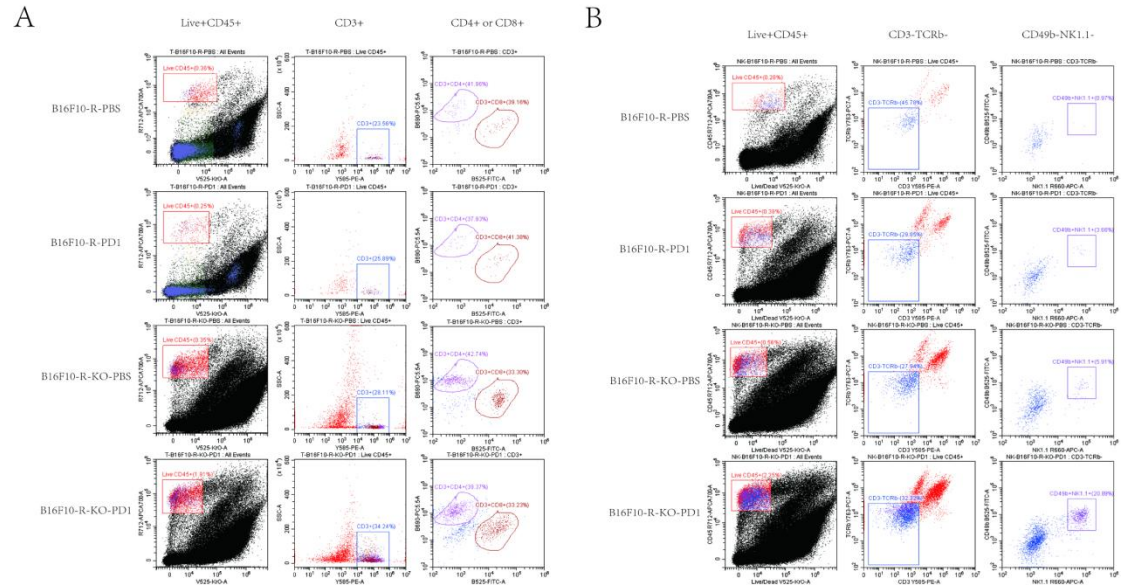
**Figure S6. Western blot analysis for COX2 expression. GAPDH was the control in the two cell lines(one-way ANOVA test, Tukey).**



**Figure S7. Concentration of PGE2 in the supernatant of tumour cells cultured in vitro.**

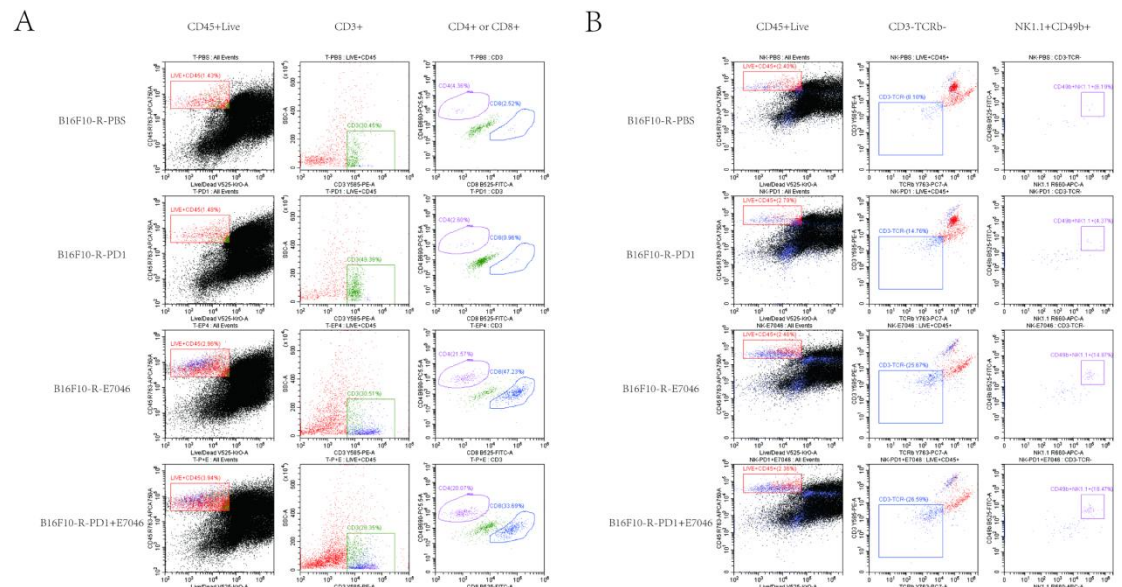
(A) Concentration of PGE2 of B16F10-NR or B16F10-R tumour cells cultured in vitro which was determined by ELISA(n = 6/group, unpaired, two-tailed t test). (B) Concentration of PGE2 of B16F10-R or B16F10-R-knockout tumour cells cultured in vitro which was determined by ELISA(n = 6/group, unpaired, two-tailed t test).





**Figure S8. Flow scatter diagrams of lymphocyte infiltration in B16F10-R or B16F10-R-knockout tumours.**

(A) Flow scatter diagram of T cell infiltration. (B) Flow scatter diagram of NK cell infiltration.



**Figure S9. Flow scatter diagrams of lymphocyte infiltration in B16F10-R tumours treated with E7046.**

(A) Flow scatter diagram of T cell infiltration. (B) Flow scatter diagram of NK cell infiltration.