Inducible Secretion of LIGHT by Engineered Probiotics Achieves Localized Cytokine Therapy and Robust Antitumor Immunity

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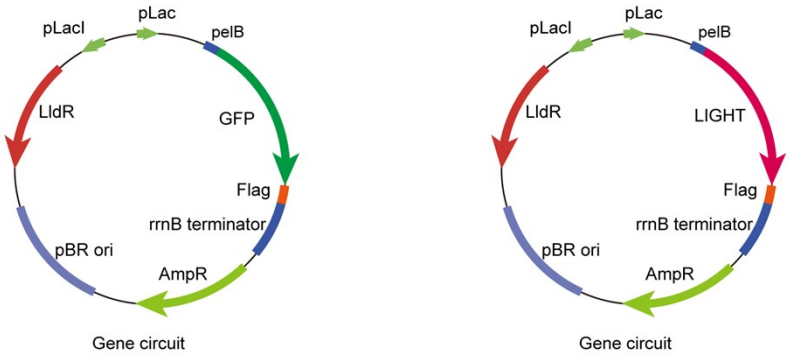
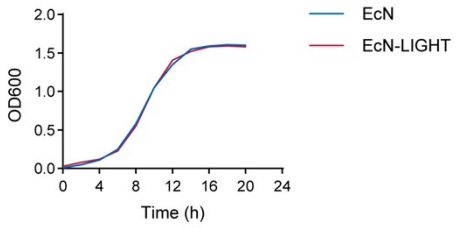
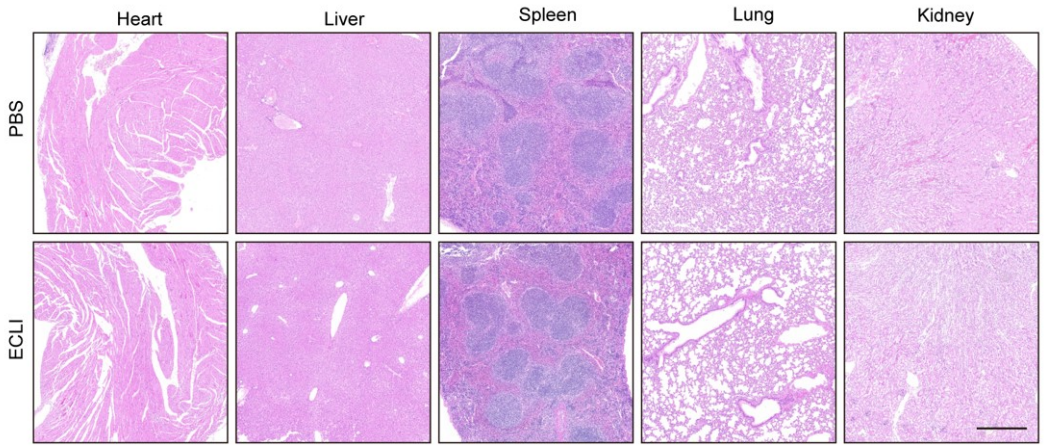


Supplementary Fig. 1. The expression map of GFP or LIGHT in the engineered bacterial plasmid responding to lactic acid

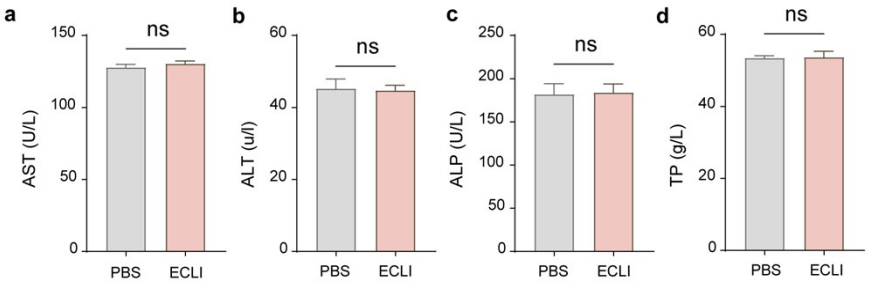


Supplementary Fig. 2. The bacterial growth curve was determined by continuously monitoring OD600 after transferring and not transferring the LIGHT plasmid.

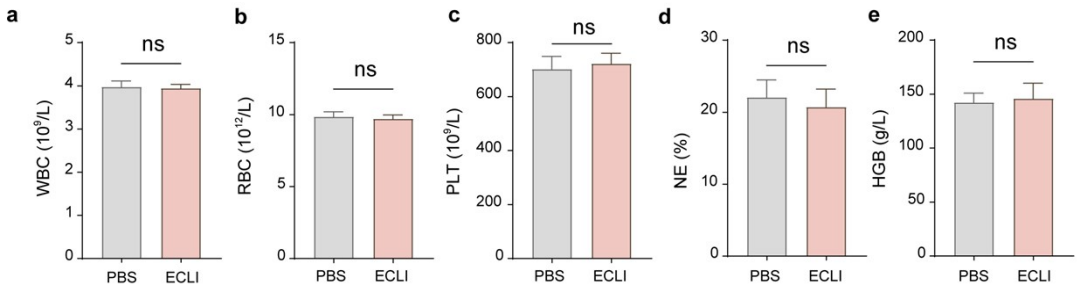


Supplementary Fig. 3. Representative H&E staining of heart, liver, spleen, lung, and kidney from

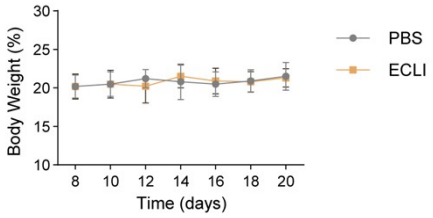
PBS and ECLI mice. No pathological alterations or inflammatory infiltrates were observed, Scale bar=100 μm.



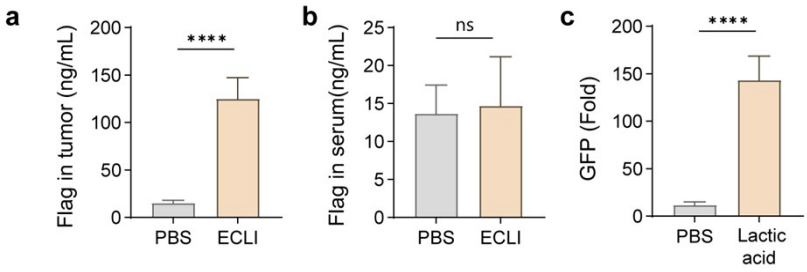
Supplementary Fig. 4. (a-d) Serum biochemical indices showing comparable AST, ALT, ALP, and TP levels between groups, indicating preserved liver function. Data represent mean ± SEM, *n* = 3 mice per group.



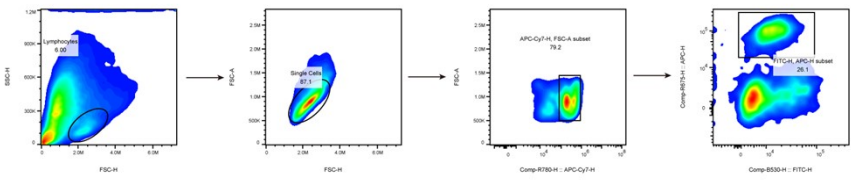
Supplementary Fig. 5. (a-e) Hematological parameters including WBC, RBC, PLT, NE, and HGB counts, all within normal ranges and statistically nonsignificant (*ns*). Data represent mean ± SEM, *n* = 3 mice per group.



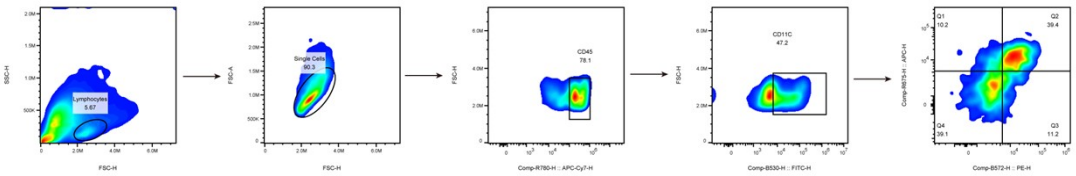
Supplementary Fig. 6. Changes in mouse body weight following different treatments



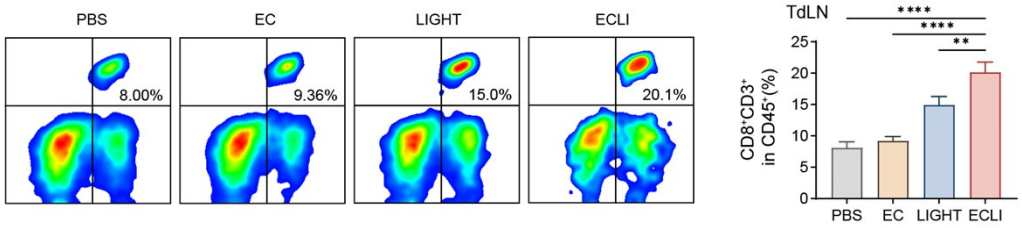
Supplementary Fig. 7. Detection of the Flag tag in tumors and serum (a, b); the Flag tag indicates LIGHT levels. Tumors were isolated and cultured, and expression was induced with lactate (c)



Supplementary Fig. 8. Flow cytometric analysis of $CD45^+$ $CD3^+CD8^+$ cells.



Supplementary Fig. 9. Flow cytometric analysis of $CD80^{+}CD86^{+}$ cells.



Supplementary Fig. 10. Scatter plots and statistical graphs of CD8+ T cells in tumor-draining lymph nodes obtained via flow cytometry