

# Double Humanized PD-L1&CTLA4 Mouse

Strain Name: C57BL/6-*Ctla4*<sup>em1(hCTLA4)</sup> *Cd274*<sup>em1(hPD-L1)/Smoc</sup>

Strain Background: C57BL/6

Cat. No. : IT-HU-00102

Double humanized PD-L1 and CTLA-4 mice provide a unique and valuable model for evaluating human specific, combinatorial antibody therapies.

## Construction strategy

On the C57BL/6 background, the full-length coding sequence of human CTLA-4 gene was placed immediately downstream of the start codon of the mouse endogenous *Ctla4* gene, followed by a poly(A) element. This guarantees an exclusive expression of human CTLA-4 in the double humanized mice. A similar construction strategy was used for the *Cd274* gene replacement.

## Validation data

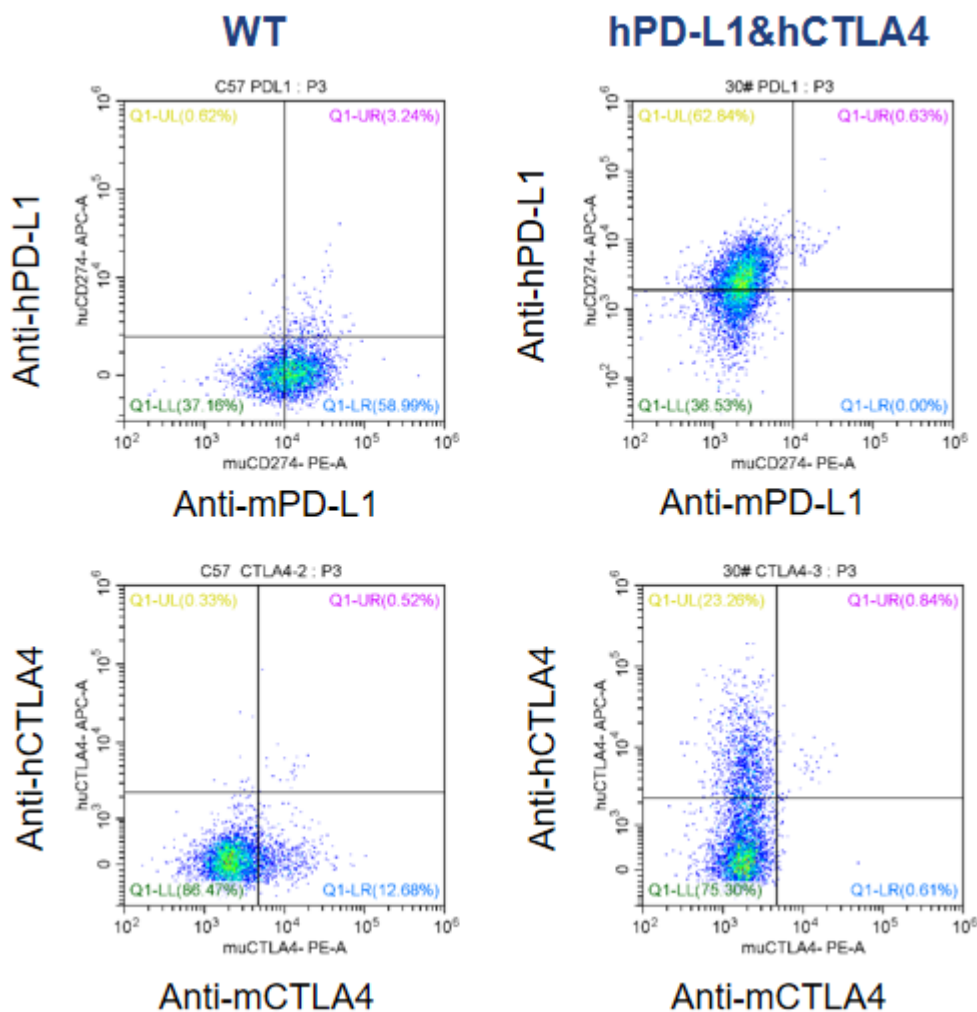


Figure 1. Splenocytes from homozygous hPD-L1/hCTLA4 mice were analyzed by flow cytometry after activation. mPD-L1<sup>+</sup> and mCTLA4<sup>+</sup> were detectable in wild type (WT) C57BL/6, while hPD-L1<sup>+</sup> and hCTLA4<sup>+</sup> cells were detectable in the homozygous hCTLA4/h4-1BB mice.

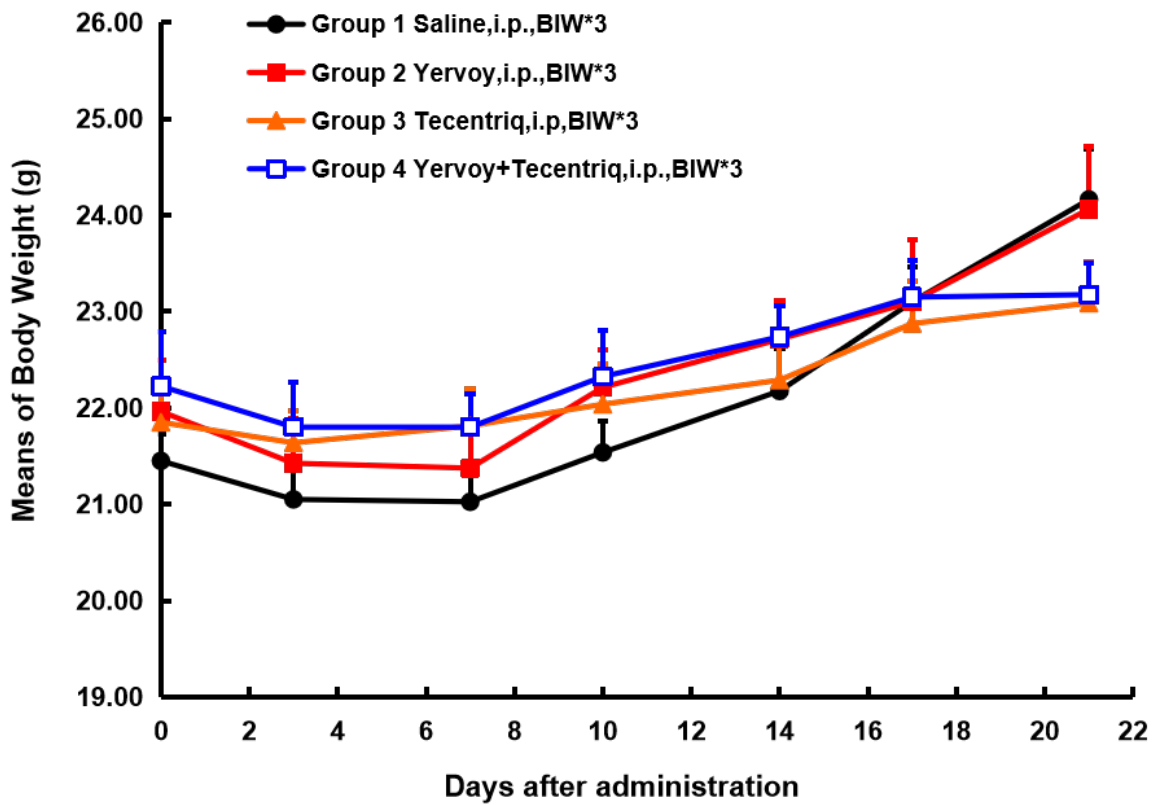
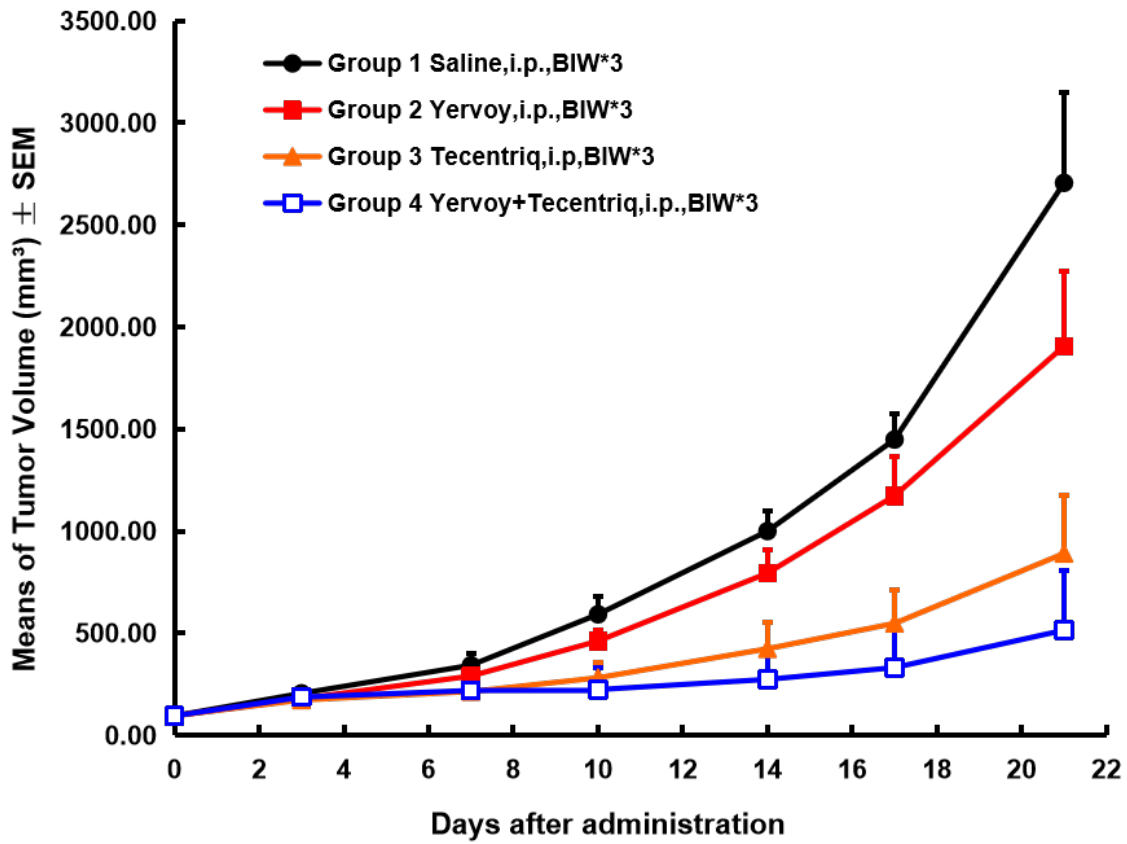


Figure 2. hCTLA-4/PD-L1 mice+ MC38 cells efficacy studies. We have developed a CTLA-4/PD-L1 dKI humanized model and tested the combined treatment of Yervoy and Tecentriq, and then observed improved efficacy in the combination treatment.

# Immune Checkpoint Humanized Mouse Models

Being recognized as a top scientific breakthrough in 2013, cancer immunotherapy is predicted to be one of the most promising research areas for improving patient outcomes. Although many immunotherapy breakthroughs may still lie ahead, important clinical advances have been made in the past few years for some of the deadliest cancers, reaffirming the potential of immunotherapy for many types of patients.

However, it is worth noting that drug candidates developed to interfere with human proteins may not comparably interact with their murine counterparts. It is therefore critical to develop humanized mouse models to enable in vivo efficacy evaluation of cancer immunotherapies.

## Immune Checkpoint Humanized Mouse Models available at ingenious targeting laboratory

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<i>4-1BB</i>	<i>PD-1/PD-L1</i>
<i>CD40</i>	<i>PD-1/TIGIT</i>
<i>CD47</i>	<i>PD-1/TIM3</i>
<i>CD73 (NT5E)</i>	<i>PD-L1</i>
<i>CTLA4 (C57BL/6)</i>	<i>PD-L1/CTLA4</i>
<i>CTLA4 (BALB/c)</i>	<i>PD-L1/LAG3</i>
<i>KDR</i>	<i>PD-L1/OX40</i>
<i>LAG3</i>	<i>PD-L1/TIGIT</i>
<i>OX40</i>	<i>SIRPA</i>
<i>OX40/CTLA4</i>	<i>SIRPA/CD47</i>
<i>PD-1 (C57BL/6)</i>	<i>TIGIT</i>
<i>PD-1 (BALB/c)</i>	<i>TIM3 (C57BL/6)</i>
<i>PD-1/4-1BB</i>	<i>TIM3 (BALB/c)</i>
<i>PD-1/CD40</i>	<i>TNFRSF1B</i>
<i>PD-1/CTLA4</i>	<b><i>And more to come!</i></b>
<i>PD-1/LAG3</i>	
<i>PD-1/OX40</i>	

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To get to know more about these models, visit our website [www.genetargeting.com](http://www.genetargeting.com)  
or contact our scientific experts at [inquiry@genetargeting.com](mailto:inquiry@genetargeting.com)

# About ingenious targeting laboratory

ingenious targeting laboratory (**ingenious**) has been a leading global provider of custom genetically modified mouse, rat, and rabbit models for over 20 years. As one of the very first mouse gene targeting companies, our trusted service is built on two decades' worth of successful animal model creation for investigators, organizations, and companies worldwide. Our models have been published in hundreds of journals including *Science*, *Nature*, and *Cell*, making us one of the most validated and respected production companies in the industry. We are excited to add catalog mouse models to our service repertoire by means of our collaboration with Shanghai Model Organisms Center (SMOC).

## **ingenious targeting laboratory**

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