

# Double Humanized SIRPA&CD47 Mouse

Strain Name: C57BL/6-*Sirpa*<sup>tm2(hSIRPA)</sup> *Cd47*<sup>em1(hCD47)/Smoc</sup>

Strain Background: C57BL/6

Cat. No. : IT-HU-190019

SIRPA is an immunoglobulin superfamily transmembrane protein with intracellular docking sites for two Src homology domain containing tyrosine phosphatases, and expressed on all myeloid cells, including monocytes, macrophage, granulocytes and myeloid dendritic cells. SIRPA is a critical immune inhibitory receptor on macrophages. CD47 is a ligand for SIRPA, and CD47 interaction with SIRPA serves as a 'self-recognition' that prevents phagocytosis of the cells expressing CD47.

## Construction strategy

Humanized SIRPA&CD47 mice were developed on the C57BL/6 background. Via homologous recombination-mediated ES cell targeting, the full-length coding sequence for the mouse *Sirpa* gene was replaced by the human counterpart, leading to an exclusive expression of human-derived SIRPA. The coding sequence for the first extracellular domain of the mouse endogenous *Cd47* gene was replaced by the human sequence, resulting in the expression of a humanized, chimeric protein.

## Validation data

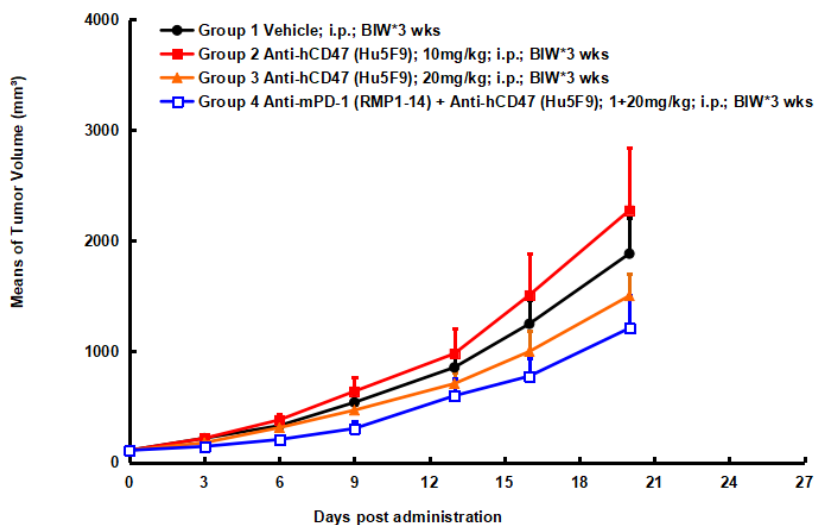
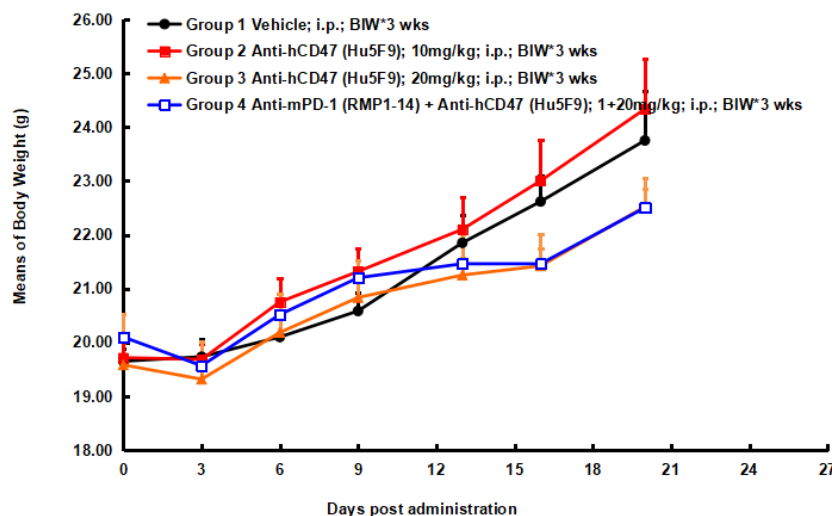


Figure 1. Evaluation of human-specific, CD47 antibody in the double humanized SIRPA&CD47 mice.



# 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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