

# Humanized TIM3 Mouse

Strain Name: C57BL/6-*Havcr2*<sup>em1(hHAVCR2)/Smoc</sup>

Strain Background: C57BL/6

Cat. No. : IT-HU-00054

As an inhibitory receptor on T cells, TIM3 (T-cell immunoglobulin and mucin-domain containing-3, also known as HAVCR2) is expressed on Th1, Th17, and CD8<sup>+</sup> T cells. Thanks to its demonstrated success in multiple preclinical studies, TIM3 exhibits unique features that make it an intriguing candidate for the next wave of immune checkpoint therapies.

## Construction strategy

The humanized TIM3 mouse model was developed on the C57BL/6 background. A chimeric expression cassette that encodes the extracellular domain of human TIM3 as well as the transmembrane and intracellular domains of murine Tim3 was inserted immediately downstream of the start codon of the mouse endogenous Tim3 gene, followed by a poly(A) site. Thereby, the extracellular domain of the mouse Tim3 was replaced by its human counterpart while the rest of the mouse gene remained unchanged.

## Validation data

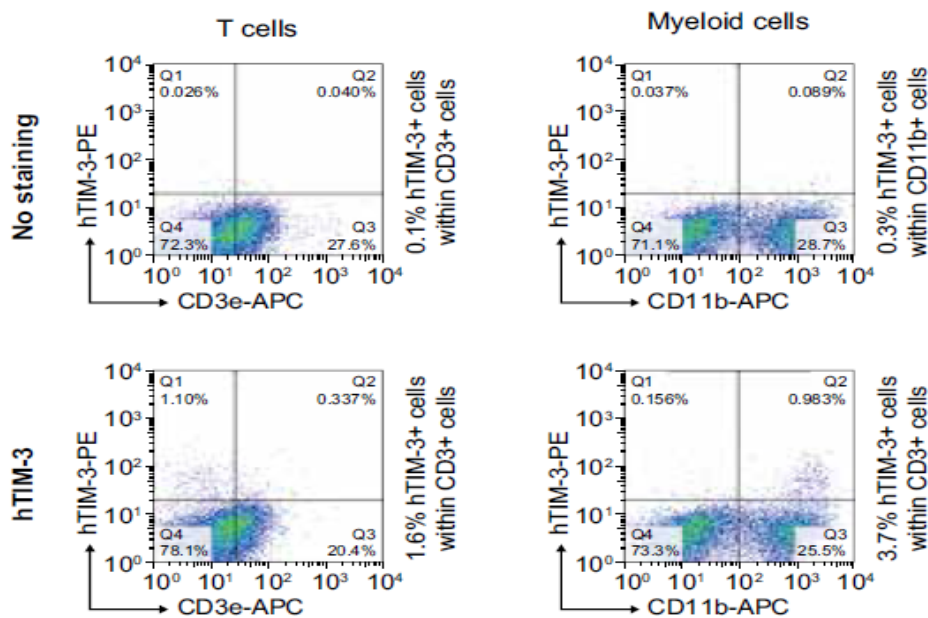


Figure 1. FACS detection of TIM3 expression in tumor infiltrating lymphocytes collected from humanized TIM3 mice. Homozygous humanized TIM3 mice were inoculated with MC38 colon cancer cells. After the tumors grew to 1000 mm<sup>3</sup>, tumor infiltrating lymphocytes were isolated and detected by FACS to measure the expression of humanized TIM3 in CD4<sup>+</sup> and CD8<sup>+</sup> T cells. The results showed that the cells with positive TIM3 expression could be detected in the tumor infiltrating lymphocytes collected from humanized TIM3 mice. (Completed in cooperation with GenScript)

# 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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