

## NCG-tdTomato

Strain Name: NOD/ShiLtJGpt-*Prkdc*<sup>em26Cd52</sup>*Il2rg*<sup>em26Cd22</sup>*H11*<sup>em1Cin(tdTomato)</sup>/Gpt

Strain Type: Knock in

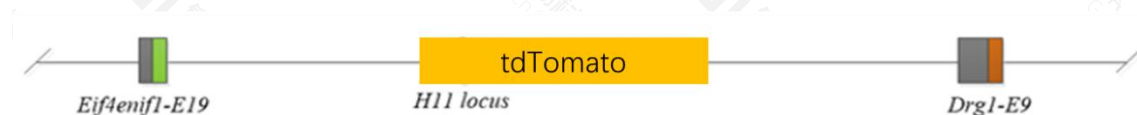
Strain ID.: T003575

Background: NOD/ShiLtJGpt

## Description

NCG-tdTomato systemic express red fluorescent (tdTomato) protein derived by CAG promoter in NCG background. The mouse strain can express red fluorescence in whole body tissues, and the target mice can be used to analyze the source of stromal cells in tumor after inoculation. Heterozygous and homozygous NCG-tdTomato mice can survive and reproduce normally. Like NCG, NCG-tdTomato mice had no mature T cells, B cells and functional NK cells in their spleen, and lack of cytokine signal, thus belonging to severe immune deficiency mice. Therefore, NCG-tdTomato is an ideal mouse model for engraftment of human hematopoietic stem cell (CD34+HSC) and peripheral blood mononuclear cell (PBMC) .

## Strategy



**Fig.1 Schematic diagram of tdTomato knock-in strategy in NCG-tdTomato mice.**

## Application

1. Visualization of allogeneic and xenografts;
2. Xenografts research, distinguishing between mouse-derived or human-derived cells;
3. Effects of tumor microenvironment in targeted drug therapy;
4. Study of cell transfer experiments.

## Data supports

### 1. The T/B/NK cell ratio detection

Spleen

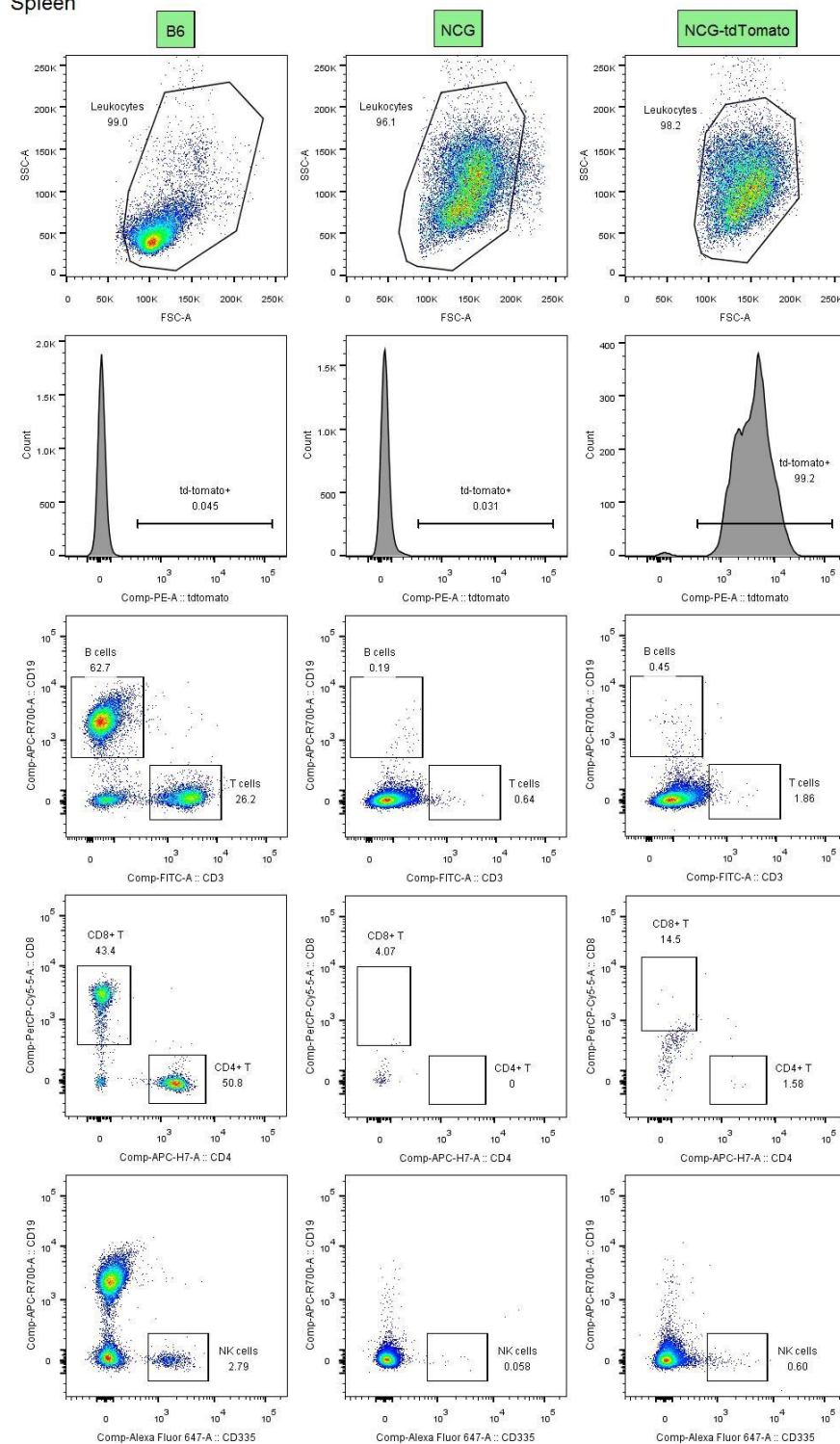


Fig.1 A strong fluorescence of tdTomato was detected in the spleen (positive ratio >99%). Few T, B and NK cells, particularly mature CD4+/CD8+ T cells, were detected in the spleen. There was no difference in the degree of immunodeficiency between NCG-tdTomato and NCG.

## 2. Detection of tissue fluorescence expression

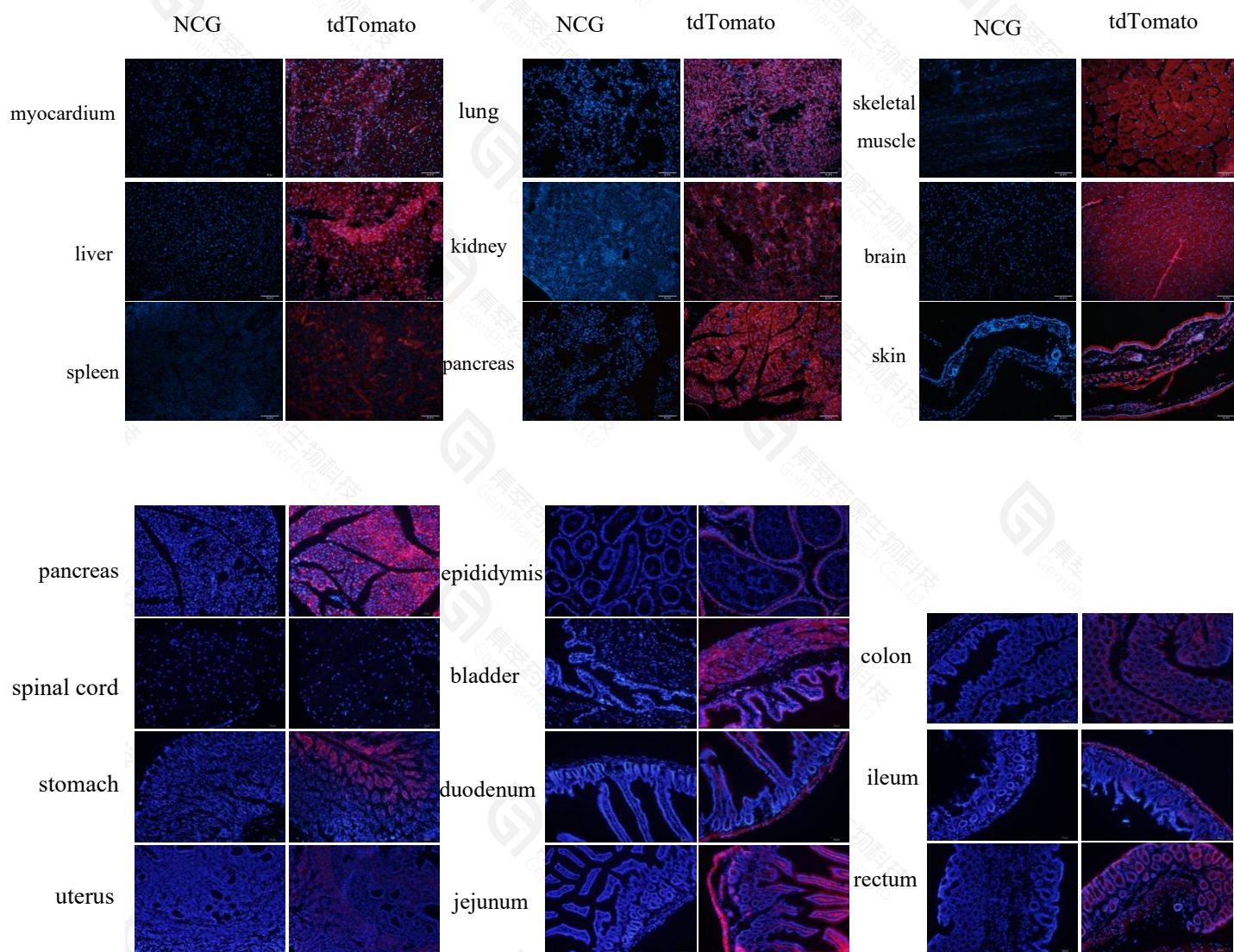


Fig.3 Red fluorescence can be detected in different organizations in NCG-tdTomato.