

B6-CAG-tdTomato

Stain Name: B6/JGpt-*H11*^{em1Cin(CAG-tdTomato)}/Gpt

Strain Type: Knock-in

Strain Number: T006772

Background: C57BL/6JGpt

Description

B6/JGpt-*H11*^{em1Cin(CAG-LoxP-ZsGreen-Stop-LoxP-tdTomato)}/Gpt(B6-G/R, strain ID: T006163) mice express ZsGreen systemically to stimulate dazzling green light, which can illuminate the morphology and structure of various cells and tissues. Therefore, the mouse is completely green when being born. However, we have buried the loxP site on both sides of ZsGreen. When Cre recombinase exists, ZsGreen in the mouse genome will be deleted, and the expression of tdTomato will be turned on to emit dazzling red fluorescent.

Based on the B6-G/R mouse model, GemPharmatech used B6-G/R mouse to mate with the systemic expression of Cre recombinase mice to remove the STOP element and open the expression of tdTomato. Removing the expression of Cre by backcrossing, can establish of a new line B6-CAG-tdTomato. It has been verified that red fluorescence can be observed in the heart, liver, spleen, lung, kidney, brain, muscle and pancreas tissue. The strain can be used to mark cells and tissues.

Strategy



Fig.1 Schematic diagram of B6-CAG-tdTomato model Strategy

Application

1. Cre-lox System
2. Pancreatic research Tools

Data support

1. Red fluorescent protein expression assay

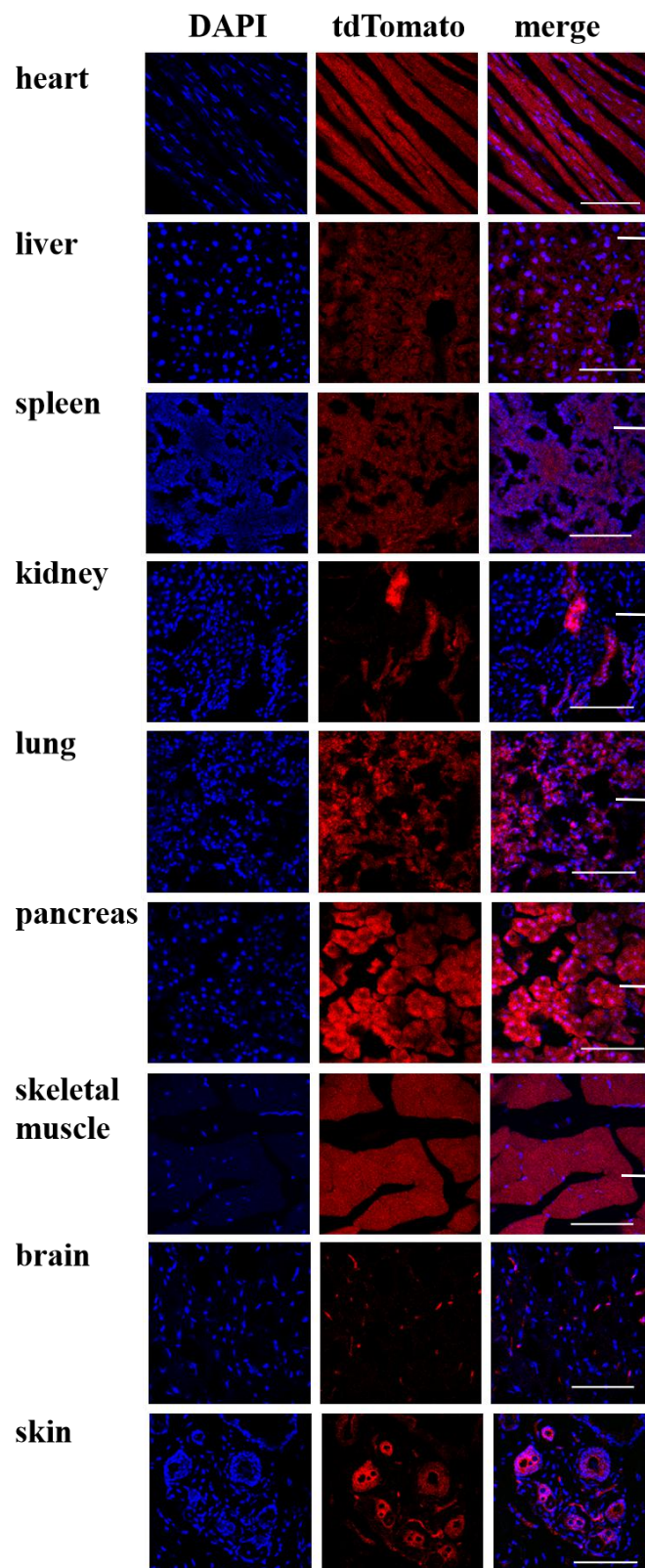


Fig.2 Red fluorescent protein expression in B6-CAG-tdTomato mice. The main tissue of B6-CAG-tdTomato mice were collected and made to frozen slices. Through observing the frozen sections of tissues, it showed strong red fluorescent in heart, liver, spleen, lung, pancreas, skeletal

muscle of B6-*CAG-tdTomato* mice, but fluorescence intensity were weak in the brain, skin, kidney(200x, Scale bar=100 μ m).

References

1. Muzumdar MD; Tasic B; Miyamichi K; Li L; Luo L. 2007. A global double-fluorescent Cre reporter mouse. *Genesis* 45(9):593-605.