

H11-CAG-loxp-zsGreen-stop-loxp-tdtomato-PolyA

Strain Name: C57BL/6JGpt-H11^{em1Cin}(CAG-loxp-zsGreen-stop-loxp-tdtomato-PolyA)/Gpt

Strain Type: Knock-in

Strain Number: T057726

Background: BALB/cJGpt

Description

We combined the green fluorescent protein ZsGreen with the red fluorescent protein tdTomato, and knocked it into the mouse H11 safe harbor site at the same time. Under normal circumstances, the whole body of mice expresses ZsGreen, which can excite dazzling green light, which can illuminate the shape and structure of various cells and tissues. Therefore, the whole body of mice is green at birth, which is different. However, we buried loxP sites 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, which can emit dazzling red light. Since Cre can be expressed tissue-specifically, mice turn on red light following the expression time and location of Cre. Note: this strain may have very slight expression of tdTomato, but will have much higher than baseline expression after Cre-mediated recombination, so it is recommended that you use Cre- as a negative control. Due to the limited number of tissues verified, the green or red fluorescence expression of some tissues is unknown.

Strategy

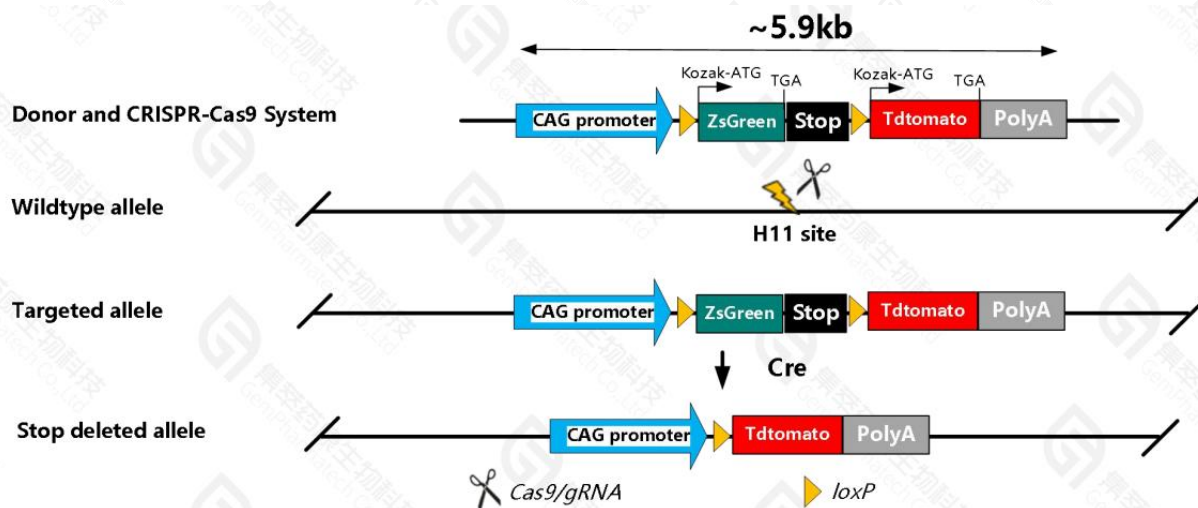


Fig.1 Schematic diagram of BALB/cJGpt-H11-CAG-loxp-zsGreen-stop-loxp-tdtomato-PolyA model strategy.

Applications

1. This mice is an ideal tool to trace the location of specific Cre expression and displaying Cell Fate [1].

Data support

1. Detection of ZsGreen fluorescent protein and tdTomato expression in mice

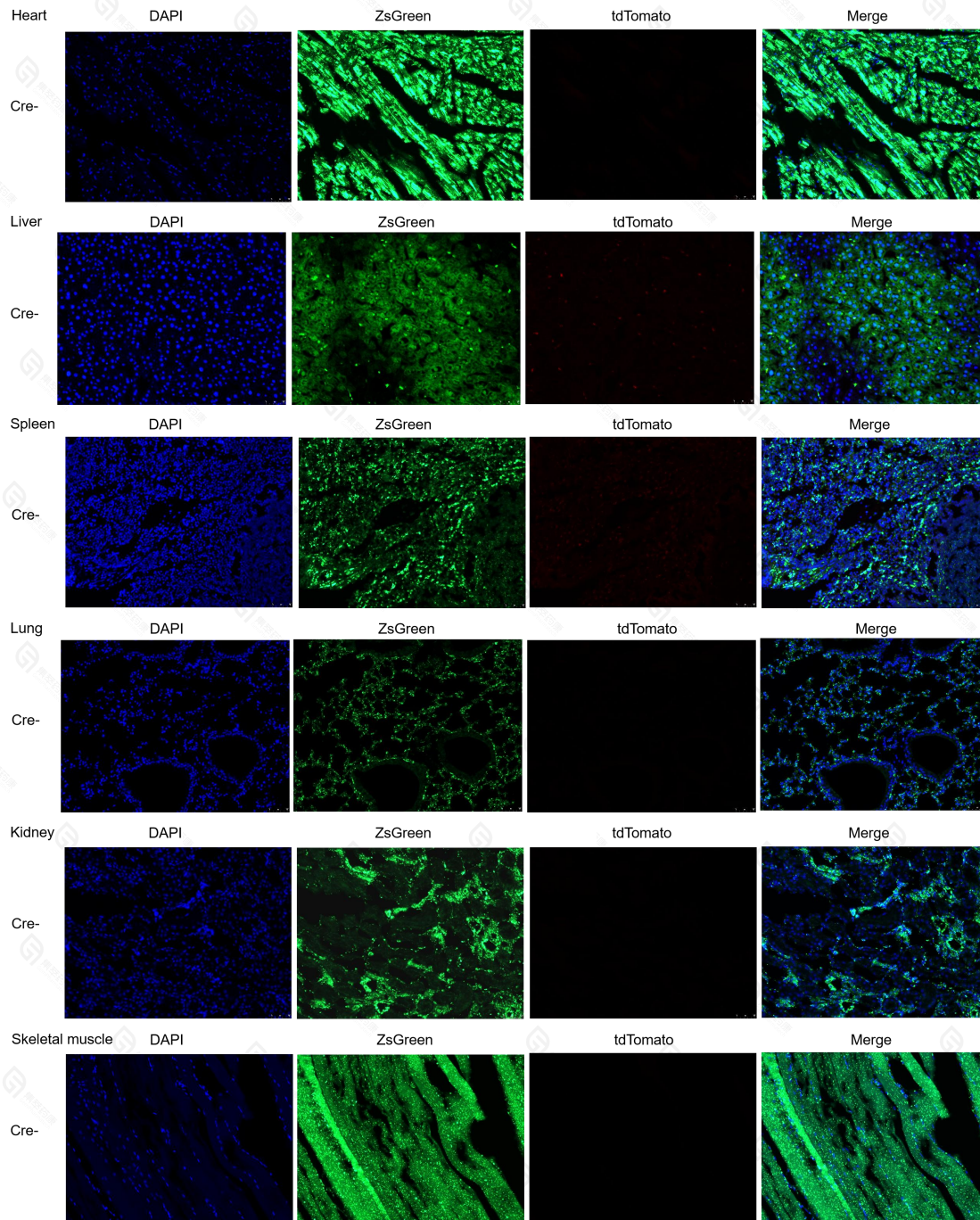


Fig 2. Fluorescence imaging of tissues and organs.

Organ name was indicated in the left top of each subfigure group. Cre-: H11-CAG-loxp-zsGreen-stop-loxp-tdtomato-PolyA single positive individuals.

Reference

1. Shimshek D R, Kim J, Hübner M R, et al. "Codon-improved Cre recombinase (iCre) expression in the mouse." *genesis* 2002, 32(1): 19-26.