B6-Alb-Cre

Stain Name：B6/JGpt-*Alb*$^{em1Cin(icre)}$/Gpt
Strain Type：Knock-in
Strain Number：T003814
Background：C57BL/6JGpt

Description

Cre recombinase were engineered to expressing in hepatocytes in this strain under the control of mouse albumin enhancer/promoter (Alb), which is a liver-specific promoter. B6-Alb-Cre is a usefull tool for liver-specific gene recombination though floxed alleles deletion when crossing with conditional knockout mouse models.

Strategy

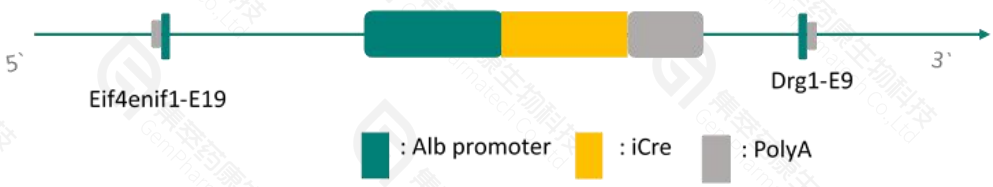

Fig.1 Schematic diagram of B6-Alb-Cre mice.

Application

1. Cre-loxP System
2. Tools for liver-related gene research
3. Tools for liver-related disease research

Data support

1. Specific expression of Cre in liver

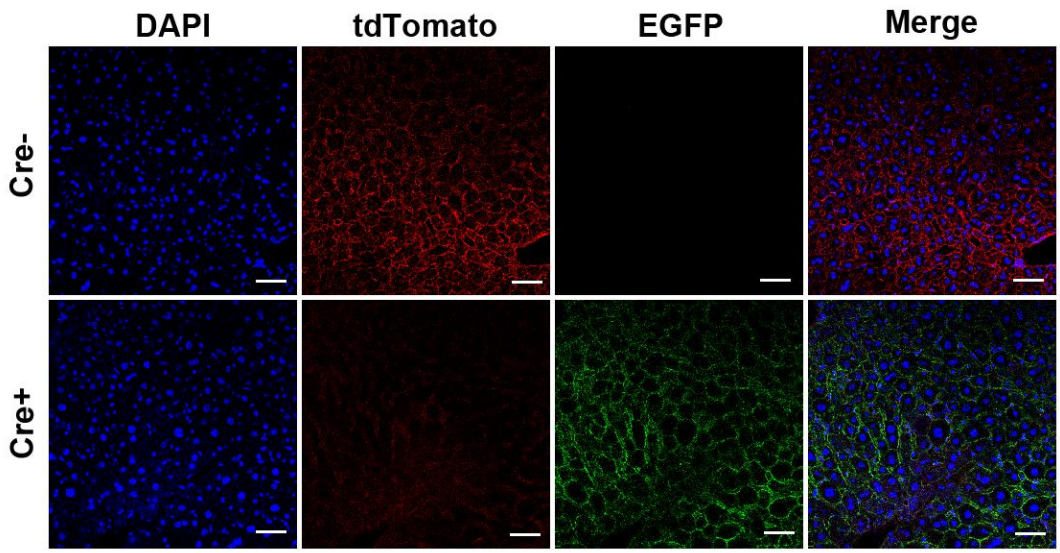

Fig.2. B6-Alb-Cre mice can specially expressed Cre recombinase in liver. The Rosa26-loxP-tdtomato-loxP-GFP mice can expresse red fluorescence naturally, while the progenys express the EGFP instead of tdtomato when parent crossed with B6-Alb-Cre. Though B6-Alb Cre and rosa26-loxP-tdtomato-loxP-GFP mice crossed, the expression of cre recombination and reconstituted activity were verified. The results showed that green fluorescence (EGFP) were expressed in the liver cells of offspring mice, and others that could not express cre were still expressed red fluorescence. Thus, B6-Alb-Cre can expressed Cre recombinase in liver cells and be usefull for the study of liver tissue cre-loxp system. (Cre- is short for rosa26 -loxP -tdtomato -loxP -GFP mice; Cre+ is a shorthand for rosa26-loxP-tdtomato-loxP-GFP and ALB-cre mating offspring. 200 x , Scale bar 50um).

References

1. Postic C; Shiota M; Niswender KD; Jetton TL; Chen Y; Moates JM; Shelton KD; Lindner J; Cherrington AD; Magnuson MA. 1999. Dual roles for glucokinase in glucose homeostasis as determined by liver and pancreatic beta cell-specific gene knock-outs.