Rosa26-CAG-Frt-ZsGreen-Stop-Frt-tdTomato-polyA Cas9-KI Strategy

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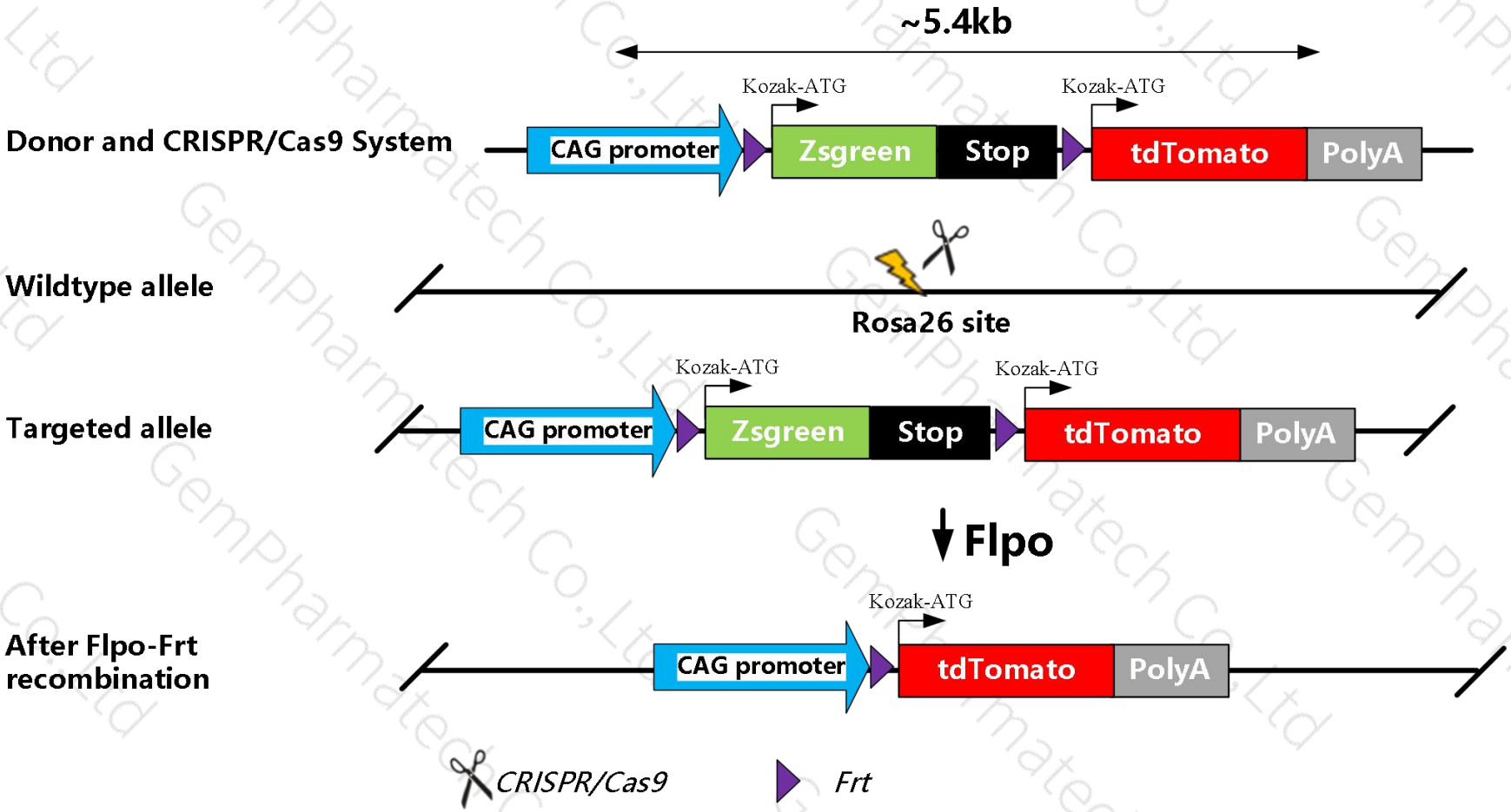
Project Overview

Project Name	***Rosa26-CAG-Frt-ZsGreen-Stop-Frt-tdTomato-polyA***
Project type	**Cas9-KI**
Strain background	**C57BL/6JGpt**

Knockin strategy

This model will use CRISPR/Cas9 technology to edit. The schematic diagram is as follows:



Technical routes

➢ The Rosa26 localization is located on mouse chromosome 6. It is a safe site for insertion of exogenous genes. The exogenous genes integrated into this site can be stably and efficiently expressed without damaging the function of endogenous genes.

➢ In this project we use CRISPR/Cas9 technology to modify Rosa26 localization. The brief process is as follows:sgRNA was transcribed in vitro, donor vector was constructed.Cas9, sgRNA and Donor were microinjected into the fertilized eggs of C57BL/6J mice.Fertilized eggs were transplanted to obtain positive F0 mice which were confirmed by PCR and sequencing. A stable F1 generation mouse model was obtained by mating positive F0 generation mice with C57BL/6J mice.

Notice

- The Rosa26 localization is located on mouse chromosome 6.If this gene is knocked into mice to reproduce with other gene-edited mouse strains, please avoid two genes located in the same chromatid, otherwise the offspring of mice with homozygous positive double genes will not be obtained.

- This Strategy is designed based on genetic information in existing databases.Due to the complexity of biological processes,all risk of loxp insertion on gene transcription, RNA splicing and protein translation cannot be predicted at existing technological level.

If you have any questions, you are welcome to inquire.

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