Docket #: S15-470

Transgenic Mouse as a Donor of Labeled Cells and Tissues (B6;FVB-Ptprca Tg(CAG-luc,-GFP)L2G85Chco Thy1a/J) - Jackson Labs stock number 025854

We created a transgenic mouse on the FVB background in which the transgene is comprised of a strong constitutive promoter (CAG) driving expression of a dual reporter gene (luciferase and GFP). We called the original FVB mouse L2G85. This mouse has been crossed to many other strains of mice including NOD, B6, Balb/c and others.

Jackson Labs stock number 025854
For-Profit companies will need a license from Stanford prior to ordering the mice from Jackson Labs.

Applications

- Isolated cells and tissues from this mouse can be used as transplants in recipient mice and their survival and movement tracked over time using in vivo bioluminescence imaging and fluorescence imaging.
- This is useful for studies of immune cell therapies, bone marrow transplant, organ transplantation, regenerative medicine, stem cell biology, cancer studies and many other types of studies.
- We have crossed this animal to spontaneous tumor mice to generate labeled primary transplantabe tumors.
- Using the substrate of luciferase, luciferin, as a model drug these animals can be used to evaluate drug delivery tools where luciferin is included in the

nanoparticle, formulation or complex used for drug delivery and then, where luciferin is delivered there will be a bioluminescent signal.
- This is the idea of visualizing pharmacokinetics in real time in living animals.

Advantages

- The dual reporter enables macro- and microscopic imaging using luciferase for whole animal imaging and using GFP for high resolution imaging.

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