Docket #: S55-609B

FVB-tg(CAG-luc,-GFP)L2G85 chco/j mouse strain - Jackson Labs Stock No. 008450

Mice homozygous for the CAG-luc-eGFP L2G85 transgene are viable and fertile, with widespread expression of firefly luciferase and enhanced green fluorescence protein directed by the CAG promoter (human cytomegalovirus immediate early promoter enhancer with chicken beta-actin/rabbit beta-globin hybrid promoter). Bioluminescence is detected in heart, spleen, muscle, pancreas, skin, thymus and bone marrow. Luciferse activity is not detected in mature erythrocytes, although low levels are detected in erythrocyte precursors and varying levels of activity in all leukocyte subsets tested. homozygotes have no reported gross physical or behavioral abnormalities. Following luciferin injection, luciferase expression is generally greater in males than females. GFP fluorescence is detected in skin (upper epidermal layers) by fluorescence microscopy. The research reports that for the mouse strain, no GFP fluorescence is detected in hematopoietic tissues by flow cytometric analysis.

Applications

- Studies of transplantation
- Noninvasivelineage mapping
- in vivo bioluminescence imaging and technology development

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