

**Please mark appropriate boxes**

**Category of phenotype:** none  mild  moderate  severe

**Special precautions for housing the animals:** yes  no

Please mark appropriate.

## Project plan – breeding of genetically modified animals (GMO)

The project plan must be sent and discussed with the animal caretakers, breeding consultant and vet before start.

Intern Stock: <b>Filled out by staff</b>	Date: 05.04.24	Common name:	Acta2RCaMP
Animal Species: Mus musculus	Gene code: STOCK Tg(RP23-370F21-RCaMP1.07)B3-3Mik/J		

### Holder of breeding license: **This is prefilled**

License file number:	2022-15-0202-00135	License expiry date:	11-02-2027
Name:	Jakob Harslund		
Address/Department:	Department of Biomedicine, Høegh Guldsbergs Gade 10, 8000 Aarhus C		
Telephone:	9350 8631	Mobile:	
E-mail:	jakob@biomed.au.dk		

### Responsible animal technician in The Animal Facility: **Filled out by staff**

Name:	
Title:	
Animal room:	
Daily maintenance:	

Outside normal working hours the researcher is responsible for extra monitoring of the animals. Furthermore, the researcher can be called in during weekends if animals are sick.

### Responsible /contact person for the animal breeding: **Filled out by you**

Name:			
Title:			
Address/Department:			
Telephone:		Mobile:	
E-mail:			
Passed course in laboratory animal science at level (x)	AD level		
	ABD level		



Other participants/assistants in the project: **Filled out by you**  
Will be contacted if contact fails to the above mentioned.

Name:	Telephone / mail	AD level	ABD level

**Where do the animals come from. For example Jackson Lab, Taconic, other universities. Please add a stock no and/or link if possible. Filled out by you**

Origin of the animals:	Acta2RCaMP: <a href="https://www.jax.org/strain/028345">https://www.jax.org/strain/028345</a>
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**Breeding information: Filled out by you**

Describe the genetic modification, Knock-out, Knock- in, etc.	
Acta2-RCaMP1.07 transgenic mice are a fluorescent calcium indicator strain that exhibits high calcium-sensor expression in smooth muscle actin, including smooth muscle cells in blood vessels, lung airways and gut. Upon RCaMP1.07 binding to calcium, increased RFP fluorescence is observed.	
Phenotype: Please include all information which can have implications on the breeding, coat color and welfare of the animals	Acta2RCaMP mice have no known or reported phenotype in the absence or presence of Cre.
Heterozygous animals:  Homozygous animals:  Hemizygous animals:  Special considerations in the daily care:	Acta2RCaMP: No phenotype in HET or HOM mice  No special considerations.
Background strain:  Which strain has been used for the backcrossing:	C57BL6J (Jax)  C57BL6J (Jax)



<p>Backcrossing strategies:</p> <p><a href="#">Backcrossing guide</a></p> <p>Recommended: 3 backcrosses between F5-F10 generations on inbred strains.</p> <p>Info on: <a href="#">Strategies to Minimize Genetic Drift and Maximize Experimental Reproducibility in Mouse Research</a></p>	<p><b>Filled out by you</b></p> <p>Every F5-F10 generation, 3 backcrosses are made to maintain the line <b>(Note, more backcrosses are needed if it's a crossed line)</b></p> <p>Correct backcross for maintaining line:            N1) ♀ Acta2RCaMP tg/tg or tg/+ x ♂ C57Bl/6J            N2) ♂ N1 Acta2 tg/+ x ♀ C57Bl/6J            N2) ♂ N2 Acta2 tg/+ x ♀ C57Bl/6J</p>
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<p>Which breeding system is to be used: Inbreeding (brother x sister), outbreeding, crossbreeding, backcrossing or other wishes: <b>Crossbreeding and inbreeding</b></p>								
<p><b>Filled out by you, please be specific.</b></p> <p><b>Genotype of breeding animals:</b> Acta2 +/+ x Acta2 tg/tg</p> <p><b>Which genotypes are preferred for the offspring:</b> Acta2 tg/+</p> <p><b>Nomenclature of the offspring:</b></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Strain:</th> <th style="text-align: center;">Homozygous</th> <th style="text-align: center;">Heterozygous</th> <th style="text-align: center;">Wildtype</th> </tr> </thead> <tbody> <tr> <td style="text-align: left;">Acta2RCaMP</td> <td style="text-align: center;">tg/tg</td> <td style="text-align: center;">tg/+</td> <td style="text-align: center;">+/+</td> </tr> </tbody> </table>	Strain:	Homozygous	Heterozygous	Wildtype	Acta2RCaMP	tg/tg	tg/+	+/+
Strain:	Homozygous	Heterozygous	Wildtype					
Acta2RCaMP	tg/tg	tg/+	+/+					
<p>Procedures at weaning: Ear-tagging, euthanasia, freezing of ear biopsies</p>								
<p><b>Filled out by you</b></p> <p>Ear-tagging, Surplus ear used for genotyping. Freeze and contact user/researcher.</p> <p>Note</p>								
<p>Need for experimental animals: Number of animals per week or month of the different genotypes:</p>								
<p><b>Filled out by you. Please be specific about the genotypes you need.</b></p> <p>10 heterozygous pr. week</p>								



What do you want staff to do with sacrificed or deceased animals when you are not present?  
(storage refrigerator/freezer, necropsy, removal of organs, contact person) **Filled out by you**

For destruction or saving.

(Note that if you want the diseased animal, you only have 2-3 weeks to pick it up,  
otherwise it will be sent for destruction by staff)

Example