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| **Tamoxifen Preparation and Administration** |

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# Purpose

This instruction describes the preparation and injection of Tamoxifen for induction of creER and creERT2 mediated recombination.

**Note:**

CreER and CreERT2 proteins are chimeric recombinase, composed of the fusion of the Cre recombinase with the ligand binding domain of a mutated form of the estrogen receptor (ER). The ER or ERT2 domain is activated by the **synthetic ligand 4-OH tamoxifen**. After administration of tamoxifen, this drug is metabolized in the liver to 4-OH tamoxifen. The CreER/CreERT2 is then translocated from the cytoplasm to the nucleus.

**This instruction is thus not relevant for induction of creER/creERT2 mediated recombination in cells culture.**

# Instruction

* 1. Preparation of Tamoxifen (10 mg/ml solution)

1. Weight 500 mg of Tamoxifen in a 50 ml Falcon tube
   1. Add 5ml 100% ethanol
   2. Add 40 ml autoclaved sunflower oil
2. Protect the Falcon tube from light and agitate for 30 min
3. Aliquot in 1 ml tube, store at -20°C and protect from light
   1. Intraperitoneal injection
4. Weight mice that will be injected with the Tamoxifen solution
5. Perform intraperitoneal injection of each mouse **over 20 grams** with 0.1 ml of Tamoxifen solution
   1. Inject mouse using 1 ml syringe (and 21G 5/8 needle in the animal room, and inject between inner thigh and genitals to ensure no organs are punctured.
   2. Inject slowly and leave needle in around 2 seconds to minimize back flow or solution loss
6. Massage each mouse at the injection site to facilitate diffusion of the compound
7. Alternate the side of injection each day
8. Repeat step 2 for a total of 10 injections: 2 injections per day (one the morning and the other the evening) during 5 consecutive days

# Reference

**Tamoxifen**: Sigma-Aldrich ref: #T5648

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| **Application date**  **of the initial version** | **Application date**  **of the current version** | **Revision date** |
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| **Main changes compared to the preceding version** | | |
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