Fertility of Homozygous Knock-out Mice IM
PC_FER_001

Purpose

To assess the fertility of homozygous knockout mice.

Experimental Design

- Minimum 1 hom x hom mating for fertile mice and minimum of 2 failed hom x hom matings attempts to proceed to secondary screen.
  - Secondary screen: Minimum 2 Hom x 1 WT or Het (Male) , Minimum 2 Hom x 1 WT or Het (Female)
- Minimal age at test = minimal age at start of procedure = 8 weeks.
- Maximum age at test = To be confirmed, proposed 14 weeks
- Minimum length of test (time mice left in mating) 4 - 6 weeks

Procedure

1. Homozygous mice (minimum age of 8 weeks, maximum age of 14 weeks) are mated for 4-6 weeks. Strains that produce no progeny or pregnant dams after 4 to 6 weeks progress to secondary screening.
2. Secondary Male Infertility Screen:
   1. Set up 2 separate matings: male Hom x female WT or Het
   2. Matings that result in visibly pregnant females (confirmed by dissection) or pups will be scored MALE FERTILE.
   3. Matings that do not result in pregnancy will be scored MALE INFERTILITY.
3. Secondary Female Infertility Screen
   1. Set up 2 separate matings: female Hom x male WT or Het
   2. Observe matings for 4 to 6 weeks;
      1. Matings that result in visibly pregnant females (confirmed by dissection) or pups will be scored FEMALE FERTILE.
      2. Matings that do not result in pregnancy will be scored FEMALE INFERTILITY.

Notes

Pregnancies should be confirmed.

All annotations are based on yes/no scores.

Parameters and Metadata
**Gross Findings Male**  IMPC_FER_001_001 | v1.4

*simpleParameter*

**Description:** gross_findings

**Options:** Infertile, Fertile,

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**Pups born (primary)**  IMPC_FER_002_001 | v1.3

*simpleParameter*

**Unit Measured:** count

**Description:** pups_born_primary_

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**Total matings (primary)**  IMPC_FER_003_001 | v1.2

*simpleParameter*

**Unit Measured:** count

**Description:** total_matings_primary_
Total litters (primary) IMPC_FER_004_001 | v1.3

simpleParameter

Req. Analysis: false
Req. Upload: false
Is Annotated: false

Unit Measured: count

Description: total_litters_primary_

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Total pups with dissection (primary) IMPC_FER_005_001 | v1.5

simpleParameter

Req. Analysis: false
Req. Upload: false
Is Annotated: false

Unit Measured: count

Description: total_pups_primary_

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Pups born (Male screen) IMPC_FER_006_001 | v1.5

simpleParameter

Req. Analysis: false
Req. Upload: false
Is Annotated: false

Unit Measured: count

Description: pups_born_male_screen_
Total matings (Male screen) IMPC_FER_007_001 | v1.4

Unit Measured: count
Description: total_matings_male_screen_

Total litters (Male screen) IMPC_FER_008_001 | v1.1

Unit Measured: count
Description: total_litters_male_screen_

Total pups/embryos (Male Screen) IMPC_FER_009_001 | v1.2

Unit Measured: count
Description: total_pups_embryos_male_screen_
Pups born (Female Screen) IMPC_FER_010_001 | v1.5


Unit Measured: count

Description: pups_born_female_screen_

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Total matings (Female Screen) IMPC_FER_011_001 | v1.4


Unit Measured: count

Description: total_matings_female_screen_

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Total litters (Female Screen) IMPC_FER_012_001 | v1.1


Unit Measured: count

Description: total_litters_female_screen_
Total pups/embryos (Female Screen) | IMPC_FER_013_001 | v1.2

**simpleParameter**

- **Req. Analysis:** false
- **Req. Upload:** false
- **Is Annotated:** false

**Unit Measured:** count

**Description:** total_pups_embryos_female_screen_

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Age of set up | IMPC_FER_014_001 | v1.0

**procedureMetadata**

- **Req. Analysis:** false
- **Req. Upload:** true
- **Is Annotated:** false

**Unit Measured:** Weeks

**Description:** age_of_set_up

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Time spent in breeding | IMPC_FER_015_001 | v1.2

**procedureMetadata**

- **Req. Analysis:** false
- **Req. Upload:** true
- **Is Annotated:** false

**Unit Measured:** days

**Description:** time_breeding
**Test strain genotype** IMPC_FER_016_001 | v1.1

**procedureMetadata**

*Req. Analysis:* false  
*Req. Upload:* true  
*Is Annotated:* false

**Description:** test_strain_genotype

**Options:** Heterozygous, Wild type, Homozygous, Hemizygous,

**Test strain background secondary (MGI ID)** IMPC_FER_017_001 | v1.2

**procedureMetadata**

*Req. Analysis:* false  
*Req. Upload:* true  
*Is Annotated:* false

**Description:** test_strain_background

**Date of matings** IMPC_FER_018_001 | v1.2

**procedureMetadata**

*Req. Analysis:* false  
*Req. Upload:* false  
*Is Annotated:* false

**Description:** date_of_matings
Gross Findings Female IMPC_FER_019_001 | v1.3

simpleParameter


Options: Fertile, Infertile,

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Age of set up (Male screen) IMPC_FER_020_001 | v1.1

procedureMetadata


Unit Measured: Weeks

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Age of set up (Female screen) IMPC_FER_021_001 | v1.0

procedureMetadata


Unit Measured: Weeks

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Time spent in breeding (Male screen) IMPC_FER_022_001 | v1.0

procedureMetadata
Time spent in breeding (Female screen) IMPC_FER_023_001 | v1.

Unit Measured: days