

# 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
    1. Observe matings for 4 to 6 weeks;
    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

Req. Analysis: false

Req. Upload: true

Is Annotated: true

Description: gross\_findings

Options: Fertile, Infertile,

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## Pups born (primary) IMPC\_FER\_002\_001 | v1.3

simpleParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: false

Unit Measured: count

Description: pups\_born\_primary\_

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## Total matings (primary) IMPC\_FER\_003\_001 | v1.2

simpleParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: false

Unit Measured: count

Description: total\_matings\_primary\_

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## 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\_

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## Total matings (Male screen) IMPC\_FER\_007\_001 | v1.4

simpleParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: false

Unit Measured: count

Description: total\_matings\_male\_screen\_

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## Total litters (Male screen) IMPC\_FER\_008\_001 | v1.1

simpleParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: false

Unit Measured: count

Description: total\_litters\_male\_screen\_

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## Total pups/embryos (Male Screen) IMPC\_FER\_009\_001 | v1.2

simpleParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: false

Unit Measured: count

Description: total\_pups\_embryos\_male\_screen\_

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## Pups born (Female Screen) IMPC\_FER\_010\_001 | v1.5

simpleParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: false

Unit Measured: count

Description: pups\_born\_female\_screen\_

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## Total matings (Female Screen) IMPC\_FER\_011\_001 | v1.4

simpleParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: false

Unit Measured: count

Description: total\_matings\_female\_screen\_

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## Total litters (Female Screen) IMPC\_FER\_012\_001 | v1.1

simpleParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: false

Unit Measured: count

Description: total\_litters\_female\_screen\_

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## 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

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## 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,

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## 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

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## Date of matings IMPC\_FER\_018\_001 | v1.2

procedureMetadata

Req. Analysis: false

Req. Upload: false

Is Annotated: false

Description: date\_of\_matings

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## Gross Findings Female IMPC\_FER\_019\_001 | v1.3

simpleParameter

Req. Analysis: false

Req. Upload: true

Is Annotated: true

Options: Fertile, Infertile,

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## Age of set up (Male screen) IMPC\_FER\_020\_001 | v1.1

procedureMetadata

Req. Analysis: false

Req. Upload: false

Is Annotated: false

Unit Measured: Weeks

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## Age of set up (Female screen) IMPC\_FER\_021\_001 | v1.0

procedureMetadata

Req. Analysis: false

Req. Upload: false

Is Annotated: false

Unit Measured: Weeks

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## Time spent in breeding (Male screen) IMPC\_FER\_022\_001 | v1.0

procedureMetadata



Req. Analysis: false

Req. Upload: false

Is Annotated: false

Unit Measured: days

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## Time spent in breeding (Female screen) IMPC\_FER\_023\_001 | v1.

0

procedureMetadata

Req. Analysis: false

Req. Upload: false

Is Annotated: false

Unit Measured: days

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## Heterozygous - Gross Findings Male IMPC\_FER\_024\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: true

Options: Fertile, Infertile,

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## Heterozygous - Gross Findings Female IMPC\_FER\_025\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: true

**Options:** Fertile, Infertile,

