# 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:** Infertile, Fertile, Pups born (primary) IMPC\_FER\_002\_001 | v1.3 simpleParameter Reg. Analysis: false Reg. Upload: false Is Annotated: false Unit Measured: count **Description:** pups\_born\_primary\_ 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\_

## Total litters (primary) IMPC\_FER\_004\_001 | v1.3

simpleParameter

Req. Analysis: false	Req. Upload: false Is Annotated: false			
Unit Measured: count				
<b>Description:</b> total_litters_prime	ary_			
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_				
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

simpleParameter

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

Unit Measured: count

Description: total\_matings\_male\_screen\_

## 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\_

## 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

Reg. Analysis: false Reg. 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\_

#### 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_geno	otype					
Options: Heterozygous, Wild	type, Homozygous, Hemizygou	JS,				
	ound secondary (Mo	GIID) IMPC_FER_017_001				
v1.2 procedureMetadata						
Req. Analysis: false	Req. Upload: true	Is Annotated: false				
Description: test_strain_background						
Date of matings IMP procedureMetadata	PC_FER_018_001   v1.2					
Req. Analysis: false	Req. Upload: false	Is Annotated: false				
<b>Description:</b> date_of_matings	S					

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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,				
	e screen) IMPC_FER_02	0_001   v1.1		
procedureMetadata				
Req. Analysis: false	Req. Upload: false	Is Annotated: false		
Unit Measured: Weeks				
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				

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

Req. Analysis: false	Req. Upload: false	Is Annotated: false		
Unit Measured: days				
•	ding (Female scree	<b>n)</b> IMPC_FER_023_001   v1.		
O procedureMetadata				
Req. Analysis: false	Req. Upload: false	Is Annotated: false		
Unit Measured: days				
Heterozygous - GrosimpleParameter	oss Findings Male II	MPC_FER_024_001   v1.0		
Req. Analysis: false	Req. Upload: false	Is Annotated: true		
Options: Fertile, Infertile,				
Heterozygous - Gross Findings Female IMPC_FER_025_001   v1.0 simpleParameter				
Req. Analysis: false	Req. Upload: false	Is Annotated: true		

Options: Fertile, In	fertile,		