Purpose

To assess visible morphological defects in E14.5-15.5 placentas from lethal strains.

Experimental Design

- Set up timed matings with heterozygous mice
- Day 0 is defined as the midpoint of the prior dark cycle following the identification of a copulation plug.
- **Minimum number of animals**: 1 mutant of any sex
- **Age at test**: E14.5-E15.5
- Capture gross images *(optional)*
- Collect tissue and genotype embryos.

Procedure

1. Set up timed mating with heterozygous animals. Dissect at a consistent time and collect >=2 placentas from homozygote embryos. Coordination with viability screen is at the centres discretion.
2. Assess placentas according to Gross Morphology parameters.
3. Generate gross images of placentas *(optional)* with scored defects and control placentas.
4. Collect tissue for genotyping
5. Process placentas for Histopathology, or other imaging *(OPTIONAL - depending on center pipeline)*
6. Scores will be shown per placenta and split by zygosity.

Notes

All genotypes should be collected using validated assays.

Y chromosome assay required for X-linked lethal strains.

Placentas may be processed for Histopathology or 3D Imaging

Parameters and Metadata
**Placenta Development** IMPC_GPO_001_001 | v1.0

simpleParameter

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

**Description:** placenta_development

**Options:** normal, abnormal, unobservable,

**Placenta Morphology** IMPC_GPO_002_001 | v1.0

simpleParameter

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

**Description:** placenta_morphology

**Options:** normal, abnormal, unobservable,

**Placenta Vasculature** IMPC_GPO_003_001 | v1.0

simpleParameter

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

**Description:** placenta_vasculature

**Options:** normal, abnormal, unobservable,
**Placenta Size** IMPC_GPO_004_001 | v1.0

*simpleParameter*


Description: placenta_size

Options: normal, abnormal, unobservable,

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**Umbilical cord morphology** IMPC_GPO_005_001 | v1.0

*simpleParameter*


Description: umbilical_cord_morphology

Options: normal, abnormal, unobservable,

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**Comment on image** IMPC_GPO_006_001 | v1.0

*simpleParameter*


Description: comment_on_image

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**Images** IMPC_GPO_007_001 | v1.0

*seriesMediaParameter*
Description: images

Increments: Minimum 1

Experimenter ID IMPC_GPO_008_001 | v1.0

Description: experimenter_id

Equipment ID IMPC_GPO_009_001 | v1.0

Description: equipment_id

Equipment Manufacturer IMPC_GPO_010_001 | v1.0

Description: equipment_manufacturer
Equipment Model IMPC_GPO_011_001 | v1.0

Description: equipment_model

Fixative IMPC_GPO_012_001 | v1.0

Description: fixative

Time of Dissection IMPC_GPO_013_001 | v1.0

Description: time_of_dissection

Somite Stage IMPC_GPO_014_001 | v1.1

Description:
**Time of dark cycle start** IMPC_GPO_015_001 | v1.0

 proceduReMetadata


 Description: time_of_dark_cycle_start

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**Time of dark cycle end** IMPC_GPO_016_001 | v1.0

 proceduReMetadata


 Description: time_of_dark_cycle_end

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**Date equipment last calibrated** IMPC_GPO_017_001 | v1.1

 proceduReMetadata


 Description: date_equipment_last_calibrated
Pale placenta IMPC_GPO_018_001 | v1.0

simpleParameter


Options: no, yes, unobservable,