Gross Morphology Placenta E14.5-E15.5 IM PC_GPO_001

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,

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**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,

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**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,

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**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
Images IMPC_GPO_007_001 | v1.0

descriptionMediaParameter


Description: images

Increments: Minimum 1

Experimenter ID IMPC_GPO_008_001 | v1.0

procedureMetadata


Description: experimenter_id

Equipment ID IMPC_GPO_009_001 | v1.0

procedureMetadata


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:**
Description: time_of_dissection

Somite Stage IMPC_GPO_014_001 | v1.1
procedureMetadata

Description: somite_stage

Time of dark cycle start IMPC_GPO_015_001 | v1.0
procedureMetadata

Description: time_of_dark_cycle_start

Time of dark cycle end IMPC_GPO_016_001 | v1.0
procedureMetadata

Description: time_of_dark_cycle_end
**Date equipment last calibrated** IMPC_GPO_017_001 | v1.1

*procedureMetadata*

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

**Description:** date_equipment_last_calibrated

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**Pale placenta** IMPC_GPO_018_001 | v1.0

*simpleParameter*

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

**Options:** no, yes, unobservable,