Gross Morphology Embryo E18.5 IMPC_GEP_003

Purpose

To assess visible morphological defects in E18.5 embryos from lethal or subviable 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:** E18.5 and Older
- 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 homozygote embryos. Coordination with viability screen is at the centres discretion.**
2. **Score embryos as live or dead if possible.**
3. **Assess embryos according to Gross Morphology parameters.**
4. **Generate gross images of embryos (optional) with scored defects and control embryos.**
5. **Collect tissue for genotyping**
6. **Process embryos for Histopathology, or other imaging (OPTIONAL - depending on center pipeline)**
7. **Scores will be shown per embryo and split by zygosity.**

If capturing images please attempt to capture left, right, front, and back views of the embryo but if this is not possible left, right is sufficient. Feel free to take higher magnification views to show morphologies of interest.

Notes

All genotypes should be collected using validated assays.

Y chromosome assay required for X-linked lethal strains.

Embryos may be processed for Histopathology or 3D Imaging

Parameters and Metadata

Heart Morphology IMPC_GEP_010_001 | v1.0

simpleParameter

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

Description: heart_morphology

Options: normal, abnormal, unobservable,

Blood Vessel Morphology IMPC_GEP_013_001 | v1.0

simpleParameter

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

Description: blood_vessel_morphology

Options: normal, abnormal, unobservable,

Head shape IMPC_GEP_015_001 | v1.0

simpleParameter

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

Description: head_shape

Options: normal, abnormal, unobservable,

Head size IMPC_GEP_016_001 | v1.0

simpleParameter

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

Description: head_size

Options: normal, abnormal, unobservable,

Facial Morphology IMPC_GEP_017_001 | v1.0

simpleParameter

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

Description: facial_morphology

Options: normal, abnormal, unobservable,

Embryo Size IMPC_GEP_022_001 | v1.0

simpleParameter

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

Description: embryo_size

Options: normal, abnormal, unobservable,

Embryo weight IMPC_GEP_023_001 | v1.0

simpleParameter

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

Description: embryo_weight

Body wall morphology IMPC_GEP_024_001 | v1.0

simpleParameter

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

Description: body_wall_morphology

Options: normal, abnormal, unobservable,

Outer ear morpholgy IMPC_GEP_026_001 | v1.0

simpleParameter

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

Description: outer_ear_morpholgy

Options: normal, abnormal, unobservable,

Vibrissa Morphology IMPC_GEP_033_001 | v1.0

simpleParameter

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

Description: vibrissa_morphology

Options: normal, abnormal, unobservable,

Skin Appearance IMPC_GEP_034_001 | v1.0

simpleParameter

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

Description: skin_appearance

Options: normal, abnormal, unobservable,

Pallor IMPC_GEP_035_001 | v1.0

simpleParameter

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

Description: pallor

Options: normal, abnormal, unobservable,

Skin Coloration IMPC_GEP_036_001 | v1.0

simpleParameter

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

Description: skin_coloration

Options: normal, abnormal, unobservable,

Tail Morphology IMPC_GEP_038_001 | v1.0

simpleParameter

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

Description: tail_morphology

Options: normal, abnormal, unobservable,

Liver Size IMPC_GEP_042_001 | v1.0

simpleParameter

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

Description: liver_size

Options: normal, abnormal, unobservable,

Respiratory System IMPC_GEP_052_001 | v1.0

simpleParameter

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

Description: respiratory_system

Options: normal, abnormal, unobservable,

Comment on image IMPC_GEP_063_001 | v1.0

simpleParameter

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

Description: comment_on_image

Images IMPC_GEP_064_001 | v1.0

seriesMediaParameter

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

Description: images

Increments: Minimum 1

Experimenter ID IMPC_GEP_065_001 | v1.0

procedureMetadata

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

Description: experimenter_id

Equipment ID IMPC_GEP_066_001 | v1.0

procedureMetadata

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

Description: equipment_id

Equipment Manufacturer IMPC_GEP_067_001 | v1.0

procedureMetadata

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

Description: equipment_manufacturer

Equipment Model IMPC_GEP_068_001 | v1.0

procedureMetadata

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

Description: equipment_model

Fixative IMPC_GEP_069_001 | v1.0

procedureMetadata

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

Description: fixative

Time of Dissection IMPC_GEP_070_001 | v1.0

procedureMetadata

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

Description: time_of_dissection

Somite Stage IMPC_GEP_071_001 | v1.1

procedureMetadata

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

Description: somite_stage

Time of dark cycle start IMPC_GEP_072_001 | v1.0

procedureMetadata

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

Description: time_of_dark_cycle_start

Time of dark cycle end IMPC_GEP_073_001 | v1.0

procedureMetadata

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

Description: time_of_dark_cycle_end

Date equipment last calibrated IMPC_GEP_074_001 | v1.1

procedureMetadata

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

Description: date_equipment_last_calibrated

Spontaneous movement IMPC_GEP_004_002 | v2.2

simpleParameter

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

Description: no_spontaneous_movement

Options: yes, unobservable, no,

Responsive to tactile stimuli IMPC_GEP_005_002 | v2.2

simpleParameter

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

Description: unresponsive_to_tactile_stimuli

Options: yes, unobservable, no,

Hemorrhage IMPC_GEP_011_002 | v2.0

simpleParameter

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

Description: hemorrhage

Options: yes, unobservable, no,

Facial Cleft IMPC_GEP_018_002 | v2.0

simpleParameter

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

Description: facial_cleft

Options: yes, unobservable, no,

Cyanosis IMPC_GEP_029_002 | v2.0

simpleParameter

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

Description: cyanosis

Options: yes, unobservable, no,

Edema IMPC_GEP_030_002 | v2.0

simpleParameter

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

Description: edema

Options: yes, unobservable, no,

Polydactyly IMPC_GEP_039_002 | v2.0

simpleParameter

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

Description: polydactyly

Options: yes, unobservable, no,

Exencephaly IMPC_GEP_047_002 | v2.0

simpleParameter

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

Description: exencephaly

Options: yes, unobservable, no,

Holoprosencephaly IMPC_GEP_048_002 | v2.0

simpleParameter

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

Description: holoprosencephaly

Options: yes, unobservable, no,

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spina bifida IMPC_GEP_049_002 | v2.0

simpleParameter

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

Description: spina_bifida

Options: yes, unobservable, no,

Microphthalmia IMPC_GEP_059_002 | v2.0

simpleParameter

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

Description: microphthalmia

Options: yes, unobservable, no,

Anophthalmia IMPC_GEP_060_002 | v2.0

simpleParameter

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

Description: anophthalmia

Options: yes, unobservable, no,

Failure of Eyelid Fusion IMPC_GEP_061_002 | v2.0

simpleParameter

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

Description: failure_of_eyelid_fusion

Options: yes, unobservable, no,

Severely Dysmorphic IMPC_GEP_075_001 | v1.2

simpleParameter

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

Options: no, yes, unobservable,

Cleft palate IMPC_GEP_076_001 | v1.1

simpleParameter

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

Options: no, yes, unobservable,

Curl or short tail IMPC_GEP_078_001 | v1.1

simpleParameter

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

Options: no, yes, unobservable,

Facial hypoplasia IMPC_GEP_079_001 | v1.1

simpleParameter

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

Options: no, yes, unobservable,

Microcephaly IMPC_GEP_080_001 | v1.2

simpleParameter

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

Options: no, yes, unobservable,

Pale liver IMPC_GEP_081_001 | v1.1

simpleParameter

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

Options: no, yes, unobservable,

Syndactyly IMPC_GEP_082_001 | v1.1

simpleParameter

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

Options: no, yes, unobservable,

Tongue out IMPC_GEP_083_001 | v1.1

simpleParameter

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

Options: no, yes, unobservable,

Limb morphology IMPC_GEP_084_001 | v1.1

simpleParameter

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

Options: normal, abnormal, unobservable,

CRL IMPC_GEP_085_001 | v1.1

simpleParameter

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

Unit Measured: mm

Delayed embryonic development IMPC_GEP_086_001 | v1.2

simpleParameter

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

Options: no, yes, unobservable,

Blebs IMPC_GEP_087_001 | v1.0

simpleParameter

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

Options: no, yes, unobservable,