Gross Morphology Embryo E14.5-E15.5 IMP C_GEO_003

Purpose

To assess visible morphological defects in E14.5-E15.5 embryos 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 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_GEO_008_001 | v1.0

simpleParameter

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

Description: heart_morphology

Options: normal, abnormal, unobservable,

Blood Vessel Morphology IMPC_GEO_011_001 | v1.0

simpleParameter

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

Description: blood_vessel_morphology

Options: normal, abnormal, unobservable,

Head shape IMPC_GEO_015_001 | v1.0

simpleParameter

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

Description: head_shape

Options: normal, abnormal, unobservable,

Head size IMPC_GEO_016_001 | v1.0

simpleParameter

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

Description: head_size

Options: normal, abnormal, unobservable,

Embryo Size IMPC_GEO_019_001 | v1.0

simpleParameter

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

Description: embryo_size

Options: normal, abnormal, unobservable,

Ear Morphology IMPC_GEO_022_001 | v1.1

simpleParameter

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

Description: abnormal_ear_morphology

Options: normal, abnormal, unobservable,

Vibrissa Morphology IMPC_GEO_028_001 | v1.0

simpleParameter

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

Description: vibrissa_morphology

Options: normal, abnormal, unobservable,

Skin Appearance IMPC_GEO_029_001 | v1.0

simpleParameter

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

Description: skin_appearance

Options: normal, abnormal, unobservable,

Skin Coloration IMPC_GEO_030_001 | v1.0

simpleParameter

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

Description: skin_coloration

Options: normal, abnormal, unobservable,

Tail Morphology IMPC_GEO_033_001 | v1.0

simpleParameter

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

Description: tail_morphology

Options: normal, abnormal, unobservable,

Liver Size IMPC_GEO_037_001 | v1.0

simpleParameter

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

Description: liver_size

Options: normal, abnormal, unobservable,

Comment on image IMPC_GEO_049_001 | v1.0

simpleParameter

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

Description: comment_on_image

Images IMPC_GEO_050_001 | v1.0

seriesMediaParameter

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

Description: images

Increments: Minimum 1

Experimenter ID IMPC_GEO_051_001 | v1.0

procedureMetadata

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

Description: experimenter_id

Equipment ID IMPC_GEO_052_001 | v1.0

procedureMetadata

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

Description: equipment_id

Equipment Manufacturer IMPC_GEO_053_001 | v1.0

procedureMetadata

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

Description: equipment_manufacturer

Equipment Model IMPC_GEO_054_001 | v1.0

procedureMetadata

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

Description: equipment_model

Fixative IMPC_GEO_055_001 | v1.0

procedureMetadata

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

Description: fixative

Time of Dissection IMPC_GEO_056_001 | v1.0

procedureMetadata

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

Description: time_of_dissection

Somite Stage IMPC_GEO_057_001 | v1.1

procedureMetadata

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

Description: somite_stage

Time of dark cycle start IMPC_GEO_058_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_GEO_059_001 | v1.0

procedureMetadata

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

Description: time_of_dark_cycle_end

Date equipment last calibrated IMPC_GEO_060_001 | v1.1

procedureMetadata

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

Description: date_equipment_last_calibrated

Hemorrhage IMPC_GEO_009_002 | v2.0

simpleParameter

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

Description: hemorrhage

Options: yes, unobservable, no,

Facial Cleft IMPC_GEO_017_002 | v2.0

simpleParameter

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

Description: facial_cleft

Options: yes, unobservable, no,

Cleft Palate IMPC_GEO_018_002 | v2.0

simpleParameter

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

Description: cleft_palate

Options: yes, unobservable, no,

Polydactyly IMPC_GEO_034_002 | v2.0

simpleParameter

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

Description: polydactyly

Options: yes, unobservable, no,

Pale Liver IMPC_GEO_038_002 | v2.0

simpleParameter

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

Description: pale_liver

Options: yes, unobservable, no,

Exencephaly IMPC_GEO_041_002 | v2.0

simpleParameter

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

Description: exencephaly

Options: yes, unobservable, no,

Holoprosencephaly IMPC_GEO_042_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_GEO_043_002 | v2.0

simpleParameter

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

Description: spina_bifida

Options: yes, unobservable, no,

Microphthalmia IMPC_GEO_047_002 | v2.3

simpleParameter

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

Description: microphthalmia

Options: yes, unobservable, no,

Anophthalmia IMPC_GEO_048_002 | v2.2

simpleParameter

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

Description: anophthalmia

Options: yes, unobservable, no,

Severely Dysmorphic IMPC_GEO_061_001 | v1.2

simpleParameter

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

Options: no, yes, unobservable,

Abdominal wall IMPC_GEO_062_001 | v1.1

simpleParameter

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

Options: normal, abnormal, unobservable,

Craniofacial morphology IMPC_GEO_063_001 | v1.1

simpleParameter

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

Options: normal, abnormal, unobservable,

Edema IMPC_GEO_064_001 | v1.1

simpleParameter

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

Options: no, yes, unobservable,

Limb morphology IMPC_GEO_065_001 | v1.1

simpleParameter

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

Options: normal, abnormal, unobservable,

Microcephaly IMPC_GEO_066_001 | v1.2

simpleParameter

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

Options: no, yes, unobservable,

Syndactyly IMPC_GEO_067_001 | v1.1

simpleParameter

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

Options: no, yes, unobservable,

CRL IMPC_GEO_068_001 | v1.1

simpleParameter

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

Unit Measured: mm

Delayed embryonic development IMPC_GEO_069_001 | v1.2

simpleParameter

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

Options: no, yes, unobservable,

Blebs IMPC_GEO_070_001 | v1.0

simpleParameter

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

Options: no, yes, unobservable,

Facial hypoplasia IMPC_GEO_071_001 | v1.0

simpleParameter

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

Options: no, yes, unobservable,

Pallor IMPC_GEO_072_001 | v1.0

simpleParameter

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

Options: normal, abnormal, unobservable,
