Gross Morphology Embryo E9.5 IMPC_GEL_003

Purpose

To assess visible morphological defects in E9.5 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:** E9.5 and Younger
- 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

Tam somite method for counting somites should be adopted:

Tam scoring system uses a forelimb range of 8 to 15 somite pairs resulting in E9.5 embryos ranging between 25 to 26 somite pairs.

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

Pericardium Morphology IMPC_GEL_006_001 | v1.0

simpleParameter

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

Options: unobservable, normal, abnormal,

Experimenter ID IMPC_GEL_045_001 | v1.0

procedureMetadata

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

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Time of Dissection IMPC_GEL_050_001 | v1.0

procedureMetadata

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

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Fixative IMPC_GEL_049_001 | v1.0

procedureMetadata

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

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Severely Dysmorphic IMPC_GEL_055_001 | v1.2

simpleParameter

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

Options: yes, unobservable, no,

Neural tube morphology IMPC_GEL_060_001 | v1.1

simpleParameter

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

Options: abnormal, unobservable, normal,

Hindbrain IMPC_GEL_030_001 | v1.0

simpleParameter

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

Options: abnormal, normal, unobservable,

Chorioallantoic fusion IMPC_GEL_019_001 | v1.0

simpleParameter

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

Options: abnormal, unobservable, normal,

Forebrain IMPC_GEL_028_001 | v1.0

simpleParameter

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

Options: normal, unobservable, abnormal,

Time of dark cycle start IMPC_GEL_052_001 | v1.0

procedureMetadata

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Otic vesicle morphology IMPC_GEL_042_001 | v1.0

simpleParameter

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

Options: abnormal, normal, unobservable,

Pale yolk sac IMPC_GEL_017_002 | v2.0

simpleParameter

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

Options: no, unobservable, yes,

Tail bud morphology IMPC_GEL_033_001 | v1.0

simpleParameter

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

Options: normal, abnormal, unobservable,

Neural tube closure IMPC_GEL_027_001 | v1.0

simpleParameter

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

Options: unobservable, abnormal, normal,

Edema IMPC_GEL_056_001 | v1.1

simpleParameter

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Options: unobservable, yes, no,

Embryo turning IMPC_GEL_011_001 | v1.0

simpleParameter

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Options: unobservable, abnormal, normal,

Somite Morphology IMPC_GEL_064_001 | v1.0

simpleParameter

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

Options: unobservable, normal, abnormal,

Allantois Morphology IMPC_GEL_014_001 | v1.0

simpleParameter

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

Options: abnormal, normal, unobservable,

Left-right axis patterning IMPC_GEL_065_001 | v1.2

simpleParameter

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Options: abnormal, normal, unobservable,

Images IMPC_GEL_044_001 | v1.0

seriesMediaParameter

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Increments: Minimum 1

Vitelline vasculature morphology IMPC_GEL_015_001 | v1.0

simpleParameter

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Options: unobservable, normal, abnormal,

Visceral yolk sac morphology IMPC_GEL_018_001 | v1.0

simpleParameter

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Options: normal, abnormal, unobservable,

Branchial arch morphology IMPC_GEL_024_001 | v1.0

simpleParameter

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

Options: normal, abnormal, unobservable,

Heart looping IMPC_GEL_057_001 | v1.1

simpleParameter

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Options: normal, unobservable, abnormal,

Equipment ID IMPC_GEL_046_001 | v1.0

procedureMetadata

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Delayed embryonic development IMPC_GEL_063_001 | v1.2

simpleParameter

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Options: yes, no, unobservable,

Midbrain IMPC_GEL_029_001 | v1.0

simpleParameter

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

Options: normal, unobservable, abnormal,

Hemorrhage IMPC_GEL_059_001 | v1.1

simpleParameter

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

Options: unobservable, yes, no,

Comment on image IMPC_GEL_043_001 | v1.0

simpleParameter

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

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Equipment Model IMPC_GEL_048_001 | v1.0

procedureMetadata

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Blebs IMPC_GEL_037_002 | v2.0

simpleParameter

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Options: unobservable, no, yes,

Vascular morphology IMPC_GEL_066_001 | v1.0

simpleParameter

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Options: abnormal, unobservable, normal,

Somite Stage IMPC_GEL_051_001 | v1.0

procedureMetadata

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Time of dark cycle end IMPC_GEL_053_001 | v1.0

procedureMetadata

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Limb Bud Morphology IMPC_GEL_038_001 | v1.0

simpleParameter

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Options: normal, unobservable, abnormal,

CRL IMPC_GEL_062_001 | v1.1

simpleParameter

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

Unit Measured: mm

Heart morphology IMPC_GEL_058_001 | v1.2

simpleParameter

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

Options: normal, abnormal, unobservable,

Embryo Size IMPC_GEL_032_001 | v1.0

simpleParameter

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

Options: unobservable, normal, abnormal,

Equipment Manufacturer IMPC_GEL_047_001 | v1.0

procedureMetadata

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Pallor IMPC_GEL_036_002 | v2.0

simpleParameter

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Options: yes, unobservable, no,

Optic vesicle morphology IMPC_GEL_061_001 | v1.1

simpleParameter

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

Options: abnormal, normal, unobservable,

Date equipment last calibrated IMPC_GEL_054_001 | v1.1

procedureMetadata

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