MicroCT E9.5 IMPC_EML_002

Purpose

To assess morphological defects in E9.5 embryos from lethal strains with MicroCT.

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.
- Collect embryos at E9.5 with 3 minimum homozygous and 1 littermate control
- Ensure embryos are bleed as much as possible.
- Reconstruct the scans according to manufacturer's instructions.

Procedure

1. Set up timed mating with heterozygous animals. Dissect and collect >=3 homozygote embryos.
2. Process the embryos using the centre’s staining and embedding protocol.
   Centre-specific methods are recorded within a document
3. Scan and generate reconstructions of embryos.

Notes

Embryos may be processed for Histopathology.

Parameters and Metadata

Camera to Source IMPC_EML_010_001 | v1.0

- Req. Analysis: false
- Req. Upload: true
- Is Annotated: false
- Unit Measured: mm

Equipment Version IMPC_EML_006_001 | v1.0
<table>
<thead>
<tr>
<th>Procedure Metadata Item</th>
<th>IMPC_EML_007_001</th>
<th>v1.0</th>
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<tbody>
<tr>
<td><strong>Image Pixel Size</strong></td>
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<tr>
<td>Unit Measured: µm</td>
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<td><strong>Date of Scan</strong></td>
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<td><strong>Equipment Manufacturer</strong></td>
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<td><strong>Equipment ID</strong></td>
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E9.5 MicroCT Preparation protocol  IMPC_EML_008_001 | v1.0

requires Analysis: false  
required Upload: true  
Is Annotated: false

Screenshots  IMPC_EML_017_001 | v1.1

required Analysis: false  
required Upload: false  
Is Annotated: false

Object to Source  IMPC_EML_009_001 | v1.0

required Analysis: false  
required Upload: true  
Is Annotated: false

Unit Measured: mm

Source Current  IMPC_EML_016_001 | v1.0

required Analysis: false  
required Upload: true  
Is Annotated: false

Unit Measured: uA
**Date of Sacrifice**  IMPC_EML_012_001 | v1.0

procedureMetadata


**Date Preparation Finished**  IMPC_EML_013_001 | v1.0

procedureMetadata


**Embryo reconstruction**  IMPC_EML_001_001 | v1.2

seriesMediaParameter


**Experimenter ID**  IMPC_EML_002_001 | v1.0

procedureMetadata


**Source Voltage**  IMPC_EML_015_001 | v1.1

procedureMetadata
Date equipment last calibrated  IMPC_EML_011_001 | v1.0

Equipment Model  IMPC_EML_005_001 | v1.0

Hindbrain  IMPC_EML_018_001 | v1.0

4th ventricle  IMPC_EML_019_001 | v1.0
Options: present, absent, abnormal, unobservable, ambiguous, imageOnly,

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**Mesencephalic vesicle** IMPC_EML_020_001 | v1.0

simpleParameter

Options: present, absent, abnormal, unobservable, ambiguous, imageOnly,

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**Forebrain** IMPC_EML_021_001 | v1.0

simpleParameter

Options: present, absent, abnormal, unobservable, ambiguous, imageOnly,

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**Telecencphalic (lateral) ventricle** IMPC_EML_022_001 | v1.0

simpleParameter

Options: present, absent, abnormal, unobservable, ambiguous, imageOnly,
**Rhombomeres** IMPC_EML_023_001 | v1.0

simpleParameter


Options: present, absent, abnormal, unobservable, ambiguous, imageOnly,

**Notochord** IMPC_EML_024_001 | v1.0

simpleParameter


Options: present, absent, abnormal, unobservable, ambiguous, imageOnly,

**Infundibular recess of 3rd ventricle** IMPC_EML_025_001 | v1.0

simpleParameter


Options: present, absent, abnormal, unobservable, ambiguous, imageOnly,

**Rathke's pouch** IMPC_EML_026_001 | v1.0

simpleParameter

**Optic vesicle** IMPC_EML_027_001 | v1.0

simpleParameter


Options: present, absent, abnormal, unobservable, ambiguous, imageOnly,

**Otocyst** IMPC_EML_028_001 | v1.0

simpleParameter


Options: present, absent, abnormal, unobservable, ambiguous, imageOnly,

**1st branchial arch** IMPC_EML_029_001 | v1.0

simpleParameter


Options: present, absent, abnormal, unobservable, ambiguous, imageOnly,
**1st arch artery** IMPC_EML_030_001 | v1.0

simpleParameter

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Req. Upload: false  
Is Annotated: true

Options: present, absent, abnormal, unobservable, ambiguous, imageOnly,

**2nd branchial arch** IMPC_EML_031_001 | v1.0

simpleParameter

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Options: present, absent, abnormal, unobservable, ambiguous, imageOnly,

**2nd arch artery** IMPC_EML_032_001 | v1.0

simpleParameter

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Req. Upload: false  
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Options: present, absent, abnormal, unobservable, ambiguous, imageOnly,

**Oropharynx** IMPC_EML_033_001 | v1.0

simpleParameter

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Req. Upload: true  
Is Annotated: true

Options: present, absent, abnormal, unobservable, ambiguous, imageOnly,
3rd branchial arch  IMPC_EML_034_001  | v1.0

simpleParameter


Options: present, absent, abnormal, unobservable, ambiguous, imageOnly,

3rd arch artery  IMPC_EML_035_001  | v1.0

simpleParameter


Options: present, absent, abnormal, unobservable, ambiguous, imageOnly,

Aortic sac  IMPC_EML_036_001  | v1.0

simpleParameter


Options: present, absent, abnormal, unobservable, ambiguous, imageOnly,

Common atrial chamber  IMPC_EML_037_001  | v1.0

simpleParameter
Atrioventricular canal IMPC_EML_038_001 | v1.0

Options: present, absent, abnormal, unobservable, ambiguous, imageOnly,

Heart ventricle IMPC_EML_039_001 | v1.0

Options: present, absent, abnormal, unobservable, ambiguous, imageOnly,

Primitive heart tube cardiac muscle IMPC_EML_040_001 | v1.0

Options: present, absent, abnormal, unobservable, ambiguous, imageOnly,
**Dorsal aorta**  IMPC_EML_041_001  | v1.0

simpleParameter

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

Options: present, absent, abnormal, unobservable, ambiguous, imageOnly,

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**Hepatic primordium**  IMPC_EML_042_001  | v1.0

simpleParameter

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Options: present, absent, abnormal, unobservable, ambiguous, imageOnly,

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**Hindgut**  IMPC_EML_043_001  | v1.0

simpleParameter

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Is Annotated: true

Options: present, absent, abnormal, unobservable, ambiguous, imageOnly,

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**Forelimb bud**  IMPC_EML_044_001  | v1.0

simpleParameter

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Options: present, absent, abnormal, unobservable, ambiguous, imageOnly,

Neural tube IMPC_EML_045_001 | v1.0


Options: present, absent, abnormal, unobservable, ambiguous, imageOnly,

Caudal neuropore IMPC_EML_046_001 | v1.0


Options: present, absent, abnormal, unobservable, ambiguous, imageOnly,

Somite IMPC_EML_047_001 | v1.0


Options: present, absent, abnormal, unobservable, ambiguous, imageOnly,
**Somite count** IMPC_EML_048_001 | v1.0

*simpleParameter*

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Is Annotated: false

**Delayed embryonic development** IMPC_EML_049_001 | v1.0

*simpleParameter*

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Req. Upload: true  
Is Annotated: true

Options: yes, no,

**Vitelline artery** IMPC_EML_050_001 | v1.0

*simpleParameter*

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Req. Upload: false  
Is Annotated: true

Options: present, absent, abnormal, unobservable, ambiguous, imageOnly,

**Umbilical vein** IMPC_EML_051_001 | v1.0

*simpleParameter*

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Req. Upload: false  
Is Annotated: true

Options: present, absent, abnormal, unobservable, ambiguous, imageOnly,
Foregut IMPC_EML_052_001 | v1.0

simpleParameter


Options: present, absent, abnormal, unobservable, ambiguous, imageOnly

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Midgut IMPC_EML_053_001 | v1.0

simpleParameter


Options: present, absent, abnormal, unobservable, ambiguous, imageOnly

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Pericardial cavity IMPC_EML_054_001 | v1.0

simpleParameter


Options: present, absent, abnormal, unobservable, ambiguous, imageOnly

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Peritoneal cavity IMPC_EML_055_001 | v1.0

simpleParameter

**Options:** present, absent, abnormal, unobservable, ambiguous, imageOnly,

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**Sinus venosus** IMPC_EML_056_001 | v1.0

**simpleParameter**

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Is Annotated: true

**Options:** present, absent, abnormal, unobservable, ambiguous, imageOnly,

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**Annotator ID** IMPC_EML_057_001 | v1.0

**procedureMetadata**

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

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**Date of Annotation** IMPC_EML_058_001 | v1.0

**procedureMetadata**

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Is Annotated: false

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