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

procedureMetadata

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

Unit Measured: mm

Equipment Version IMPC_EML_006_001 | v1.0

procedureMetadata

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

---

Image Pixel Size IMPC_EML_007_001 | v1.0

procedureMetadata

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

Unit Measured: µm

Date of Scan IMPC_EML_014_001 | v1.0

procedureMetadata

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

---

Equipment Manufacturer IMPC_EML_004_001 | v1.0

procedureMetadata

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

---

Equipment ID IMPC_EML_003_001 | v1.0

procedureMetadata

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

---

E9.5 MicroCT Preparation protocol IMPC_EML_008_001 | v1.0

procedureMetadata

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

---

Screenshots IMPC_EML_017_001 | v1.1

seriesMediaParameter

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

---

Object to Source IMPC_EML_009_001 | v1.0

procedureMetadata

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

Unit Measured: mm

Source Current IMPC_EML_016_001 | v1.0

procedureMetadata

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

Unit Measured: uA

Date of Sacrifice IMPC_EML_012_001 | v1.0

procedureMetadata

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

---

Date Preparation Finished IMPC_EML_013_001 | v1.0

procedureMetadata

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

---

Embryo reconstruction IMPC_EML_001_001 | v1.2

seriesMediaParameter

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

---

Experimenter ID IMPC_EML_002_001 | v1.0

procedureMetadata

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

---

Source Voltage IMPC_EML_015_001 | v1.1

procedureMetadata

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

Unit Measured: kV

Date equipment last calibrated IMPC_EML_011_001 | v1.0

procedureMetadata

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

---

Equipment Model IMPC_EML_005_001 | v1.0

procedureMetadata

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

---

Hindbrain IMPC_EML_018_001 | v1.0

simpleParameter

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

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

---

4th ventricle IMPC_EML_019_001 | v1.0

simpleParameter

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

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

---

Mesencephalic vesicle IMPC_EML_020_001 | v1.0

simpleParameter

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

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

---

Forebrain IMPC_EML_021_001 | v1.0

simpleParameter

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

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

---

Telecenphalic (lateral) ventricle IMPC_EML_022_001 | v1.0

simpleParameter

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

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

---

Rhombomeres IMPC_EML_023_001 | v1.0

simpleParameter

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

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

---

Notochord IMPC_EML_024_001 | v1.0

simpleParameter

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

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

---

Infundibular recess of 3rd ventricle IMPC_EML_025_001 | v1.0

simpleParameter

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

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

---

Rathke's pouch IMPC_EML_026_001 | v1.0

simpleParameter

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

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

---

Optic vesicle IMPC_EML_027_001 | v1.0

simpleParameter

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

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

---

Otocyst IMPC_EML_028_001 | v1.0

simpleParameter

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

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

---

1st branchial arch IMPC_EML_029_001 | v1.0

simpleParameter

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

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

---

1st arch artery IMPC_EML_030_001 | v1.0

simpleParameter

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

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

---

2nd branchial arch IMPC_EML_031_001 | v1.0

simpleParameter

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

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

2nd arch artery IMPC_EML_032_001 | v1.0

simpleParameter

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

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

Oropharynx IMPC_EML_033_001 | v1.0

simpleParameter

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

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

3rd branchial arch IMPC_EML_034_001 | v1.0

simpleParameter

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

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

3rd arch artery IMPC_EML_035_001 | v1.0

simpleParameter

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

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

---

Aortic sac IMPC_EML_036_001 | v1.0

simpleParameter

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

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

---

Common atrial chamber IMPC_EML_037_001 | v1.0

simpleParameter

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

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

---

Atrioventricular canal IMPC_EML_038_001 | v1.0

simpleParameter

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

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

---

Heart ventricle IMPC_EML_039_001 | v1.0

simpleParameter

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

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

---

Primitive heart tube cardiac muscle IMPC_EML_040_001 | v1.0

simpleParameter

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

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,

---

Hepatic primordium IMPC_EML_042_001 | v1.0

simpleParameter

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

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

---

Hindgut IMPC_EML_043_001 | v1.0

simpleParameter

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

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

---

Forelimb bud IMPC_EML_044_001 | v1.0

simpleParameter

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

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

---

Neural tube IMPC_EML_045_001 | v1.0

simpleParameter

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

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

---

Caudal neuropore IMPC_EML_046_001 | v1.0

simpleParameter

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

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

---

Somite IMPC_EML_047_001 | v1.0

simpleParameter

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

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

---

Somite count IMPC_EML_048_001 | v1.0

simpleParameter

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

---

Delayed embryonic development IMPC_EML_049_001 | v1.0

simpleParameter

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

Options: yes, no,

Vitelline artery IMPC_EML_050_001 | v1.0

simpleParameter

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

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

---

Umbilical vein IMPC_EML_051_001 | v1.0

simpleParameter

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

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

---

Foregut IMPC_EML_052_001 | v1.0

simpleParameter

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

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

---

Midgut IMPC_EML_053_001 | v1.0

simpleParameter

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

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

---

Pericardial cavity IMPC_EML_054_001 | v1.0

simpleParameter

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

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

---

Peritoneal cavity IMPC_EML_055_001 | v1.0

simpleParameter

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

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

Sinus venosus IMPC_EML_056_001 | v1.0

simpleParameter

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

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

---

Annotator ID IMPC_EML_057_001 | v1.0

procedureMetadata

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

---

Date of Annotation IMPC_EML_058_001 | v1.0

procedureMetadata

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

---