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

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<th>Req. Analysis</th>
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Unit Measured: mm

**Equipment Version** IMPC_EML_006_001 | v1.0
Image Pixel Size  IMPC_EML_007_001 | v1.0

Date of Scan  IMPC_EML_014_001 | v1.0

Equipment Manufacturer  IMPC_EML_004_001 | v1.0

Equipment ID  IMPC_EML_003_001 | v1.0
E9.5 MicroCT Preparation protocol IMPC_EML_008_001 | v1.0

procedureMetadata


Screenshots IMPC_EML_017_001 | v1.1

seriesMediaParameter


Object to Source IMPC_EML_009_001 | v1.0

procedureMetadata

Unit Measured: mm

Source Current IMPC_EML_016_001 | v1.0

procedureMetadata

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
Unit Measured: kV

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,
Mesencephalic vesicle  IMPC_EML_020_001 | v1.0

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

Forebrain  IMPC_EML_021_001 | v1.0

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

Telecenphalic (lateral) ventricle  IMPC_EML_022_001 | v1.0

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

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**Notochord** IMPC_EML_024_001 | v1.0

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

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

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**Optic vesicle** IMPC_EML_027_001 | v1.0

*simpleParameter*

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**Otocyst** IMPC_EML_028_001 | v1.0

*simpleParameter*

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

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1st arch artery  IMPC_EML_030_001  |  v1.0

simpleParameter


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

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2nd branchial arch  IMPC_EML_031_001  |  v1.0

simpleParameter


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

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2nd arch artery  IMPC_EML_032_001  |  v1.0

simpleParameter


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

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Oropharynx  IMPC_EML_033_001  |  v1.0

simpleParameter


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
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Dorsal aorta  IMPC_EML_041_001 | v1.0

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Hepatic primordium  IMPC_EML_042_001 | v1.0

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Hindgut  IMPC_EML_043_001 | v1.0

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Forelimb bud  IMPC_EML_044_001 | v1.0

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Neural tube  IMPC_EML_045_001 | v1.0

simpleParameter


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

Caudal neuropore  IMPC_EML_046_001 | v1.0

simpleParameter


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

Somite  IMPC_EML_047_001 | v1.0

simpleParameter


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

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

**Vitelline artery** IMPC_EML_050_001 | v1.0

**Umbilical vein** IMPC_EML_051_001 | v1.0

**Options:**
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**Foregut**  IMPC_EML_052_001 | v1.0

simpleParameter


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

**Midgut**  IMPC_EML_053_001 | v1.0

simpleParameter


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

**Pericardial cavity**  IMPC_EML_054_001 | v1.0

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

**Peritoneal cavity**  IMPC_EML_055_001 | v1.0

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