**Fig. 1**

**a**

- Dissect E8.25 embryos
- Snap-freeze 10 embryos individually
- snATAC-seq

1. Pool embryos & extract nuclei
2. Tagment with 1st barcode
3. Pool and sort nuclei
4. PCR-amplify with 2nd barcode
5. Library preparation & sequencing

**b**

- Erythroid
- Endothelium
- Allantois
- Mixed mesoderm
- Mesenchyme
- Pharyngeal mesoderm
- Cardiomyocytes
- Paraxial mesoderm
- Somitic mesoderm
- NMP
- Spinal cord
- Mid/Hindbrain
- Forebrain
- Neural crest
- Surface ectoderm
- ExE endoderm

**c**

- Median total reads: 22,232
- Median reads in peaks: 8,219
- Median promoter coverage: 19.18%

**Data pre-processing and quality control**

- 19,453 nuclei