GENE-SWitCH

The regulatory GENomE of SWine and CHicken: functional annotation during development

Protocol WP1 T1.4
Pooling of total RNAs for Iso-seq

Authors: Hervé Acloque (INRAE)

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Protocol associated with Deliverable(s):	D1.3
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1 Summary

GENE-SWitCH aims at identifying functional elements located in the genomes of pig and chicken working on seven different tissues at three different developmental stages. It requires a collection of samples corresponding to the selected tissues and developmental stages with associated metadata describing accurately the samples and the sampling process.

The seven tissues analysed in GENE-SWitCH are:

- Cerebellum
- Lung
- Kidney
- Dorsal skin
- Small intestine
- Liver
- Skeletal muscle

The three developmental stages are:

- Early organogenesis (E8 chick embryo and D30 pig foetuses)
- Late organogenesis (E15 chick embryo and D70 pig foetuses)
- Newborn piglets and hatched chicks

To increase the quantity of available material for Iso-seq, we decided to pool total RNAs for each tissue at a defined developmental stage. We finally produced 21 pools, for each of the 7 tissues at the 3 different stages of development.

2 Protocol description

Working on ice, total RNAs extracted from each sample were pooled according to the following table:

	Liver	Small intestine	Lungs	Hindlimb muscle	Kidney	Cerebellum	Back skin
E8 embryos	SAMEA7680184 SAMEA7680191 SAMEA7680198 SAMEA7680205	SAMEA7680185 SAMEA7680192 SAMEA7680199 SAMEA7680206	SAMEA7680186 SAMEA7680193 SAMEA7680200 SAMEA7680207	SAMEA7680187 SAMEA7680194 SAMEA7680201 SAMEA7680208	SAMEA7680188 SAMEA7680195 SAMEA7680202 SAMEA7680209	SAMEA7680189 SAMEA7680196 SAMEA7680203 SAMEA7680210	SAMEA7680190 SAMEA7680197 SAMEA7680204 SAMEA7680211
E15 embryos	SAMEA7679800 SAMEA7679801 SAMEA7679798 SAMEA7679799	SAMEA7679804 SAMEA7679805 SAMEA7679802 SAMEA7679803	SAMEA7679808 SAMEA7679809 SAMEA7679806 SAMEA7679807	SAMEA7679812 SAMEA7679813 SAMEA7679810 SAMEA7679811	SAMEA7679816 SAMEA7679817 SAMEA7679814 SAMEA7679815	SAMEA7679820 SAMEA7679821 SAMEA7679818 SAMEA7679819	SAMEA7679822 SAMEA7679824 SAMEA7679822 SAMEA7679823
Hatched	SAMEA7679850 SAMEA7679853 SAMEA7679851 SAMEA7679852	SAMEA7679854 SAMEA7679857 SAMEA7679855 SAMEA7679856	SAMEA7679858 SAMEA7679861 SAMEA7679859 SAMEA7679860	SAMEA7679862 SAMEA7679865 SAMEA7679863 SAMEA7679864	SAMEA7679866 SAMEA7679869 SAMEA7679867 SAMEA7679868	SAMEA7679870 SAMEA7679873 SAMEA7679871 SAMEA7679872	SAMEA7679874 SAMEA7679877 SAMEA7679875 SAMEA7679876

The Biosamples IDs (https://www.ebi.ac.uk/biosamples/) correspond to the metadata of the samples used in each pool.

Samples are finally stored into a cryotube storage box at -80°C.