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Transcription profiling of mouse Ngn3 expressing cells and endocrine pancreatic cells from wild type and Ngn3 mutant animals at day 15 of embryonic development - Study GBCO3100

Genomics Study Specifications

Study Name	Transcription profiling of mouse Ngn3 expressing cells and endocrine pancreatic cells from wild type and Ngn3 mutant animals at day 15 of embryonic development
Contact Name	Gerard Gradwohl (IGBMC)
Publication	http://www.ncbi.nlm.nih.gov/pubmed/20040487
My Strategies	Return to My Strategies page
Classification	Pancreas development and growth
Links	 Biomaterials Graph  ArrayExpress
BCBC Release Date	October 25, 2007
Public Release Date	November 30, 2009
Citation	Soyer J, Flasse L, Raffelsberger W, Beucher A, Orvain C, Peers B, Ravassard P, Vermot J, Voz ML, Mellitzer G, Gradwohl G. Rfx6 is an Ngn3-dependent winged helix transcription factor required for pancreatic islet cell development . Development. 2010. 137:203-12

Synopsis**Study Description**

Goals

Approaches

Results

Conclusions

Related Studies

The basic helix-loop-helix transcription factor Neurogenin3 (Ngn3/Neurog3) is expressed in endocrine progenitor cells in the embryonic mouse pancreas. Ngn3 controls endocrine cell fate decisions. Ngn3 deficient mice do not develop any pancreatic endocrine cells, including insulin producing beta cells, and die postnatally from diabetes. Therefore, the characterization of gene expression in Ngn3-expressing cells and their progeny is of particular interest for the development of novel strategies for cell replacement therapies in type-1 diabetes. Here we describe two studies. In the first study (8 assays) we used mice where the EYFP (Enhanced Yellow fluorescent Protein) is expressed under the control of Ngn3 regulatory elements (knock add on strategy). EYFP-positive, Ngn3-expressing cells, were FACS sorted from embryonic pancreas at day 15.5 (E15.5), as well as EYFP-negative cells. In the second study (6 assays) we compared wild-type and Ngn3 mutant pancreas at E15.5. All samples were hybridized to Affymetrix GeneChip Mouse Genome 430.2.0 array.

Platform types Expression, Expression microarray

Platforms

Show platform [Affymetrix Mouse430_2](#)


Study Design Type

- cell_type_comparison_design
- genetic_modification_design
- organism_part_comparison_design

Study Factors

Show study factors

Access Status

 This resource is publicly viewable.

Request this Resource


 Request from a repository


Primary contributor: [Gradwohl Lab](#)
Co-contributed by:

- [Stoeckert Lab](#)

Resource Tags


Affymetrix GeneChip Mouse Genome 430 2.0 array, Dach1, Fev, Insm1, Lhx1, Mafa, Mlxipl, Neurod1, Neurog3, ngn3, Ngn3, Ngn3 EYFP/ mouse, ngn3 gerard, Pax4, Pax6, Rfx6, si:dkeyp-93d12.2, Vdr

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Resource History & Actions

Approved on Oct 25, 2007
Last modified on Aug 02, 2011

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Related resources**BCBC**

No matching resources

Other Consortia

No matching resources

Data courtesy of [dkCOIN](#). Only public resources are displayed.

Study Assays

[Show study assays](#)

Access to Study Data

This Study Data is publicly available to all users.

Gene List(s)

Use the following form(s) to refine the parameters and add the gene list to a strategy:

EYFP+ vs. EYFP- pancreatic cells in Ngn3 IRES-YFP knock add on mouse embryos

|Fold Change| Greater Than:

Confidence Level: High Confidence All Results

For a microarray experiment a result with high confidence has a confidence level of at least 80%.

For a ChIP-chip experiment a result with high confidence has a confidence level of at least 90% and all fold changes are positive.

Reference (Denominator): Ngn3 EYFP neg

Ngn3 knock out vs. wild type embryonic day 15.5 pancreas

Genome Browser


There are no genome browser tracks currently available for this study.

Lists of Locations

There are no genomic location datasets currently available for this study.

Repositories


Gradwohl Lab

 [Request this resource](#)

Stock #: *Not provided*
Availability Notes: *Not provided*

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