


 Search

- Home
 - Genomics
 - News & Information
 - Research
 - Cores
 - Resources
 - People
 - Workspaces
 - My Account
 - About Us
-
- All
 - Adenoviruses
 - Antibodies
 - Bioimages
 - mESC Lines
 - Mouse Strains
 - Genomics Studies
 - Protocols
 - Miscellaneous
 - Research Data
 - Visualization

My Account

- Login
- Create Account

Resources

- View All (813)
- Adenoviruses (137)
- Antibodies (175)
- Bioimages (67)
- Genomics Studies (145)
- mESC Lines (68)
- Mouse Strains (120)
- Miscellaneous (46)
- Protocols (55)
- Research Data (4)
- Resource Tags (389)
- Visualization (9)

Research & Cores

- Core Facilities (5)
- Research Highlights (5)
- Research Networks
- Research Objectives

Information

- About the BCBC
- BCBC Events
- Branding & Logos
- Career Opportunities
- Health
- NIH hESC Registry
- Policies & Guidelines
- Member Publications
- Research Programs
- Research Investigators
- Member Directory
- Tutorials

Global expression analysis of gene regulatory pathways during endocrine pancreatic development - Study GBCO1110

Genomics Study Specifications

Study Name	Global expression analysis of gene regulatory pathways during endocrine pancreatic development
Contact Name	Guoqiang Gu (Vanderbilt University)
Publication	http://www.ncbi.nlm.nih.gov/pubmed/14660441
My Strategies	Return to My Strategies page
Classification	Pancreas development and growth
Links	Biomaterials Graph ArrayExpress
BCBC Release Date	April 09, 2004
Public Release Date	April 09, 2004
Citation	Gu G, Wells JM, Dombkowski D, Preffer F, Aronow B, Melton DA. Global expression analysis of gene regulatory pathways during endocrine pancreatic development . Development. 2004. 131:165-79

Synopsis

Study Description

Goals

Approaches

Results

Conclusions

Related Studies

To define genetic pathways that regulate development of the endocrine pancreas, we generated transcriptional profiles of enriched cells isolated from four biologically significant stages of endocrine pancreas development: endoderm before pancreas specification, early pancreatic progenitor cells, endocrine progenitor cells and adult islets of Langerhans. These analyses implicate new signaling pathways in endocrine pancreas development, and identified sets of known and novel genes that are temporally regulated, as well as genes that spatially define developing endocrine cells from their neighbors. The differential expression of several genes from each time point was verified by RT-PCR and in situ hybridization. Moreover, we present preliminary functional evidence suggesting that one transcription factor encoding gene (Myt1), which was identified in our screen, is expressed in endocrine progenitors and may regulate alpha, beta and delta cell development. In addition to identifying new genes that regulate endocrine cell fate, this global gene expression analysis has uncovered informative biological trends that occur during endocrine differentiation.

Platform types Expression, Expression microarray

- Platforms**
- Show platform Affymetrix Mu11KsubA
 - Show platform Affymetrix Mu11KsubB
 - Show platform Affymetrix MG_U74A
 - Show platform Affymetrix MG_U74A

Study Design Type

- cell_type_comparison_design
- development_or_differentiation_design

Access Status

This resource is publicly viewable.

Request this Resource

Request from a repository

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

- [Stoeckert Lab](#)

Resource Tags

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Resource History & Actions

Approved on Apr 09, 2004
 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.

- [genetic_modification_design](#)
- [organism_part_comparison_design](#)

Study Factors

Show study factors

Study Assays

Show study assays

Access to Study Data

This Study Data is publicly available to all users.

Gene List(s)

There are no gene lists currently available for this study.

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

Gu Lab


 Request this resource

Stock #: *Not provided*

Availability Notes: *Not provided*

Comments

There are no comments for this entry.

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