

**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**

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

**Synopsis**

<b>Study Description</b>	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.

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

- [genetic\\_modification\\_design](#)
- [organism\\_part\\_comparison\\_design](#)

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**Study Factors**

Show study factors

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**Study Assays**

Show study assays

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**Access to Study Data**

This Study Data is publicly available to all users.

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**Gene List(s)**

*There are no gene lists currently available for this study.*

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**Genome Browser**

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

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**Lists of Locations**

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

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**Repositories**

**Gu Lab**

 Request this resource

**Stock #:** *Not provided*


**Availability Notes:** *Not provided*

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**Comments**

*There are no comments for this entry.*

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