Skeletal Muscle Insulin Receptor Knockout - Control, Streptozotocin Diabetic and Insulin Treated - Study GBCO2336

Genomics Study Specifications

Study Name: Skeletal Muscle Insulin Receptor Knockout - Control, Streptozotocin Diabetic and Insulin Treated

Contact Name: Ronald C Kahn (Joslin Diabetes Center and Harvard Medical School)


My Strategies: Return to My Strategies page

Classification: Cell stimulation/injury

Links: Biomaterials Graph

BCBC Release Date: April 13, 2009

Public Release Date: April 13, 2009


Synopsis

The targeted muscle insulin receptor knockout (MIRKO) model was used, in which there is a complete absence of the insulin-receptor signaling in skeletal muscle but normal insulin and glucose levels. By comparing skeletal muscle gene-expression profiles from MIRKO mice and their controls (lox/lox) under three different metabolic conditions (namely, in the basal state, after streptozotocin (STZ)-induced diabetes, and after STZ-induced diabetes rendered euglycemic with insulin treatment), we can address the following three important questions. (i) What is the direct effect of the loss of insulin signaling on gene expression in skeletal muscle? (ii) What is the contribution of the metabolic and other changes that accompany diabetes to induce indirect changes in gene expression? (iii) How are these pathways regulated and implicated in the pathophysiology of diabetes?

Platform types: Expression microarray, Expression

Platforms: Show platform Affymetrix MG_U74A

Study Design Type: compound_treatment_design, genetic modification_design

Study Factors: Show study factors

Study Assays: Show study assays

Access Status

This resource is publicly viewable.

Request this Resource

Request from a repository

Primary contributor: Stoeckert Lab

Resource Tags

Read more about tags

Resource History & Actions

Approved on Apr 13, 2009
Last modified on Aug 02, 2011

Related resources

BCBC
No matching resources

Other Consortia
No matching resources

Data courtesy of duCOIN. Only public resources are displayed.
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
Stoeckert Lab

<table>
<thead>
<tr>
<th>Stock #</th>
<th>Availability Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not provided</td>
<td>Not provided</td>
</tr>
</tbody>
</table>

Comments
There are no comments for this entry.

Login to add comments