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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)
Publication	http://www.ncbi.nlm.nih.gov/pubmed/15546994
My Strategies	Return to My Strategies page
Classification	Cell stimulation/injury
Links	Biomaterials Graph ArrayExpress
BCBC Release Date	April 13, 2009
Public Release Date	April 13, 2009
Citation	Yechoor VK, Patti ME, Ueki K, Laustsen PG, Saccone R, Rauniyar R, Kahn CR. Distinct pathways of insulin-regulated versus diabetes-regulated gene expression: an in vivo analysis in MIRKO mice. Proc Natl Acad Sci U S A. 2004. 101:16525-30
Synopsis	Study Description | Goals | Approaches | Results | Conclusions | Related Studies 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 to Study Data

Access Status

This resource is publicly viewable.

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Primary contributor: Stoeckert Lab

Resource Tags

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Resource History & Actions

Approved on Apr 13, 2009
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.

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

Request this resource

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

Comments

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