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Human skeletal muscle - type 2 diabetes - Swedish males - Study GBCO2360

Genomics Study Specifications

Study Name	Human skeletal muscle - type 2 diabetes - Swedish males
Contact Name	David Altshuler (Whitehead Institute)
Publication	http://www.ncbi.nlm.nih.gov/pubmed/12808457
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	Mootha VK, Lindgren CM, Eriksson KF, Subramanian A, Sihag S, Lehar J, Puigserver P, Carlsson E, Ridderstråle M, Laurila E, Houstis N, Daly MJ, Patterson N, Mesirov JP, Golub TR, Tamayo P, Spiegelman B, Lander ES, Hirschhorn JN, Altshuler D, Groop LC. PGC-1alpha-responsive genes involved in oxidative phosphorylation are coordinately downregulated in human diabetes. Nat Genet. 2003. 34:267-73
Synopsis	Study Description | Goals | Approaches | Results | Conclusions | Related Studies DNA microarrays can be used to discover gene expression changes characteristic of human disease. This is challenging, however, when relevant differences are subtle at the level of individual genes. We introduce an analytical strategy, Gene Set Enrichment Analysis, designed to detect modest but coordinate changes in the expression of groups of functionally related genes. Using this approach, we identify a set of genes involved in oxidative phosphorylation whose expression is coordinately decreased in human diabetic muscle. Expression of these genes is high at sites of insulin-mediated glucose disposal, activated by PGC-1a, and correlated with total-body aerobic capacity. Our results associate this gene set with clinically important variation in human metabolism, and illustrate the value of pathway relationships in the analysis of genomic profiling experiments.
Platform types	Expression microarray, Expression
Platforms	Show platform Affymetrix HG-U133A
Study Design Type	• disease_state_design
Study Factors	Show study factors
Study Assays	Show study assays

Access to Study Data

This Study Data is publicly available to all users.

Access Status

This resource is publicly viewable.

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Primary contributor: Stoeckert Lab

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Resource History & Actions

Approved on Apr 13, 2009
Last modified on Jan 17, 2012

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BCBC

No matching resources

Other Consortia

No matching resources

Data courtesy of dkCOIN. Only public resources are displayed.

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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