Package ‘Affyhgu133Plus2Expr’

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Type Package
Title Affyhgu133Plus2Expr (GPL570) Expression Data Package
Version 1.8.0
Date 2014-4-9
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Description Contains pre-built human (GPL570) database of gene expression profiles. The gene expression data was downloaded from NCBI GEO and preprocessed and normalized consistently. The biological context of each sample was recorded and manually verified based on the sample description in GEO.
License GPL (>=2)
Depends R (>= 2.10)
biocViews Genome, Homo_sapiens_Data, GEO
NeedsCompilation no

R topics documented:

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Affyhgu133Plus2Expr-package

Affymetrix Human Genome U133 Plus 2.0 Array (GPL570) Expression Data Package

Description

Contains gene expression profiles from Affymetrix Human Genome U133 Plus 2.0 Array (GPL570). This package is primarily designed for GSCA (Gene Set Context Analysis). All gene expression data are downloaded from NCBI GEO. Gene expression data were preprocessed and normalized consistently using fRMA. Gene expression values are further standardized using gene expression barcode approach. The biological context of each sample was recorded and manually verified based on the sample description in GEO. Gene expression profiles are stored as hdf5 format.

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Details

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Type: Package
Version: 1.0.0
Date: 2014-4-9
License: GPL 2.0

Author(s)

Author: Zhicheng Ji, Hongkai Ji
Maintainer: Zhicheng Ji <zji4@jhu.edu>

References


Affyhgu133Plus2Expr Data of human gene expression profiles from the Affymetrix Human Genome U133 Plus 2.0 Array (GPL570).

Description

The data set contains 5153 human profiles on 19944 genes downloaded from NCBI GEO. Gene expression data were preprocessed and normalized consistently using fRMA. Gene expression values are further standardized using gene expression barcode approach. The biological context of each sample was recorded and manually verified based on the sample description in GEO. The gene expression value matrix is stored in hdf5 format using rhdf5 package.

Details

This data package contains expression values of 19944 genes and 5153 samples measurements from NCBI GEO obtained using the GPL570 platform. Gene expression data were preprocessed and normalized consistently using fRMA. Gene expression values were further standardized using gene expression barcode approach. Probesets that corresponds to the same gene are averaged, so that each gene uniquely matches to one row in the database. The biological context of each sample was also recorded and manually verified based on the sample description in GEO. To enhance the reading speed of the dataset, the gene expression value matrix is stored in a hdf5 format using rhdf5 package. The rows of the matrix represents samples and the columns of the matrix represent genes. Notice that all values are 1000 times the actual value so that the values can be stored as integers to minimize file size and reading time. The package is specifically designed to be manipulated by GSCA package so users are not expected to read the expression values by themselves. The sample id, sample type, and experiment id for each sample in the gene expression compendium are also included in this data package.
Source
www.ncbi.nlm.nih.gov/geo/

References


Affyhg133Plus2Exprtab

Reference table for Affyhg133Plus2Expr gene expression compendium

Description
Contains the sample id, sample type, and experiment id for each sample in the Affymetrix Human hgu133a Array (GPL570) gene expression compendium.

Usage
data(Affyhg133Plus2Exprtab)

Format
A data frame with 5153 observations on the following 3 variables.

SampleID a character vector
ExperimentID a character vector
SampleType a character vector

Details
SampleID is a GSM ID that NCBI GEO uses to as a sample identifier. ExperimentID is a GEO ID that NCBI GEO uses to identify an experiment. SampleType denotes the cell type or tissue and whether the sample is given a specific treatment or in a specific condition.

Source
www.ncbi.nlm.nih.gov/geo/
References


Examples

```r
## Load the reference table
data(Affyhg13Plus2Exprtab)
str(Affyhg13Plus2Exprtab)
```
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