Package 'PCHiCdata'

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Type Package

Title Promoter Capture Hi-C data

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Author Paula Freire-Pritchett, Jonathan Cairns, Steven Wingett, Mikhail Spivakov

Maintainer Mikhail Spivakov <mikhail.spivakov@lms.mrc.ac.uk>

Description Subsets of Promoter Capture Hi-C data conveniently packaged for Chicago users. Data includes interactions detected for chromosomes 20 and 21 in GM12878 cells and for chromosomes 18 and 19 in mESC.

License Artistic-2.0

Depends R (>= 3.2), Chicago

Suggests testthat, BiocStyle, knitr

VignetteBuilder knitr

LazyData true

biocViews ExperimentData, SequencingData, Homo_sapiens_Data, Mus_musculus_Data, StemCell

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PCHiCdata-package *Promoter Capture Hi-C data*

Description

Promoter Capture data Hi-C conveniently packaged for consumption by R users. Data includes interactions detected for chromosomes 20 and 21 in GM12878 cells and for chromosomes 18 and 19 in mESC.

Details

Package:	PCHiCdata
Type:	Package
Version:	0.1
Date:	2015-05-22
License:	Artistic-2.0
Depends:	R (>= 3.1.2), Chicago
LazyData:	true

Index:

sGM12878	Promoter Capture data for chromosomes 20 and 21 in GM12878
smESC	Promoter Capture data for chromosomes 18 and 19 in smESC

Author(s)

Mikhail Spivakov, Jonathan Cairns, Paula Freire Pritchett, Steven Wingett

Maintainer: Paula Freire-Pritchett <paula.freire-pritchett@babraham.ac.uk>

References

Mifsud, B. et al. "Mapping long-range promoter contacts in human cells with high-resolution capture Hi-C." Nature Genetics (2015) doi:10.1038/ng.3286

Schoenfelder, S. et al. "The pluripotent regulatory circuitry connecting promoters to their long-range interacting elements." Genome research 25.4 (2015): 582-597.

Examples

```
data(sGM12878)
data(smESC)
```

sGM12878 *Promoter Capture data for chromosomes 20 and 21 in GM12878*

Description

Promoter Capture data to be used as a toy example to run all steps of Chicago. This data only incorporates read pairs including both chromosomes 20 and 21 in order to minimize processing time and memory storage. Thus, this data set includes all cis read pairs for these two chromosomes and all trans read pairs between them.

The hg19 genome was used.

The package includes ChIP-seq data from the ENCODE consortium, also restricted to chr20 and chr21. (The ENCODE Project Consortium, 2012 "An Integrated Encyclopedia of DNA Elements in the Human Genome." Nature 489 (September): 57-74. Data accession numbers: Bernstein lab GSM733752, GSM733772, GSM733708, GSM733664, GSM733771, GSM733758)

Usage

```
sGM12878
```

Format

A ChicagoData object.

Value

A chicagoData object.

Source

Mifsud, B. et al. "Mapping long-range promoter contacts in human cells with high-resolution capture Hi-C." Nature Genetics (2015) doi:10.1038/ng.3286

See Also

chicagoData

Examples

```
data(sGM12878)
##modifications to sGM12878, ensuring it uses correct design directory
designDir <- file.path(system.file("extdata", package="PCHiCdata"), "hg19TestDesign")
sGM12878 <- modifySettings(cd = sGM12878, designDir=designDir)
```

smESC *Promoter Capture data for chromosomes 18 and 19 in smESC*

Description

Promoter Capture data to be used as a toy example to run all steps of Chicago. This data only incorporates read pairs including both chromosomes 18 and 19 in order to minimize processing time and memory storage. Thus, this data set includes all cis read pairs for these two chromosomes and all trans read pairs between them.

The mm9 genome was used.

The package includes ChIP-seq data from the ENCODE consortium, also restricted to chr18 and chr19. (The ENCODE Project Consortium, 2012 "An Integrated Encyclopedia of DNA Elements in the Human Genome." Nature 489 (September): 57-74. Data accession numbers: Snyder lab GSM1003750, GSM1003756, GSM1003751; Ren lab GSM1000126, Hardison lab ENCFF001ZJO, ENCFF001ZQY)

Usage

```
smESC
```

Format

A ChicagoData object.

Value

A chicagoData object.

Source

Schoenfelder, S. et al. "The pluripotent regulatory circuitry connecting promoters to their long-range interacting elements." Genome research 25.4 (2015): 582-597.

See Also

chicagoData

Examples

```
data(smESC)
##modifications to smESC, ensuring it uses correct design directory
designDir <- file.path(system.file("extdata", package="PCHiCdata"), "mm9TestDesign")
smESC <- modifySettings(cd = smESC, designDir=designDir)
```

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