

Package ‘RnaSeqTutorial’

April 8, 2015

Title RNA-Seq Tutorial (EBI Cambridge UK, October 2011)

Version 0.3.1

Author Nicolas Delhomme, Ismael Padioleau

Description A selection of RNA-Seq data to get familiar with the related Bioconductor core packages and the easyRNASeq package.

Maintainer Nicolas Delhomme <nicolas.delhomme@umu.se>

License Artistic-2.0

Depends R (>= 3.0.2), methods, easyRNASeq

Suggests Rsamtools, ShortRead, BSgenome.Dmelanogaster.UCSC.dm3, GenomicAlignments, biomaRt, genomeIntervals

biocViews ExperimentData, RNAseqData

R topics documented:

Deprecated data	1
gAnnot	2
RnaSeqTutorial	2
Index	4

Deprecated data *The following data has been deprecated:*

- *annot.gff*

Description

- The `annot.gff` file containing exon annotation from FlyBase v5.29 (<http://flybase.org>, Tweedie et al., 2009) has been superseded by the `Dmel-mRNA-exon-r5.52.gff3` file from FlyBase v5.52 (April 2013) containing both mRNA and exon annotation type.

gAnnot *Drosophila melanogaster genic annotation retrieved from FlyBase v5.29 (June 2010)*

Description

Annotation for *D. melanogaster* retrieved as a gff file from FlyBase (Tweedie et al.,2009) and post-processed. This file should not be used for analyses purposes.

Usage

```
data(gAnnot)
```

See Also

The package vignette: RnaSeqTutorial.

RnaSeqTutorial *An RNA-Seq tutorial*

Description

This tutorial, described in the attached RnaSeqTutorial vignette, introduces the core Bioconductor packages necessary for processing RNA sequencing data. It then introduces the easyRNAseq package that can simplify this task and offer different processing to be done on Next-Generation Sequencing data. It was used for various Bioconductor workshops since June 2010.

Usage

```
vignette("RnaSeqTutorial")
```

Arguments

RnaSeqTutorial The vignette containing the tutorial.

Format

The different data available are:

- in data:
 - gAnnot A file containing the *Drosophila melanogaster* genic annotation retrieved from FlyBase v5.29 (June 2010) and converted into a [RangedData](#) object. Although the corresponding gff file has been deprecated - see below - that annotation is still usable.
 - gRngList A file containing the *Drosophila melanogaster* mRNA and exon annotation retrieved from FlyBase v5.52 (April 2013) and converted into a [GRangesList](#) object.

- in extdata:
 - AACTG.bam, AACTG.bam, ATGGCT.bam, TTGCGA.bam 4 RNA-Seq samples from D. melanogaster demultiplexed, with their associated .bai indexes
 - Dmel-mRNA-exon-r5.52.gff3 The gff3 file containing the information stored in the gRngList [GRangesList](#) object mentioned above.
 - annot.gff Deprecated. The gff file containing the information stored in the gAnnot [RangedData](#) object mentioned above.
 - gapped.bam A D.melanogaster RNA-Seq file containing a few examples of gapped alignment (done by tophat) surrounding the Mef2 gene locus
 - multiplex_export.txt.gz The original export file containing the multiplexed data mentioned above.
 - subset_export.txt.gz A D.melanogaster RNA-Seq export file, restricted to 100,000 reads
 - subset.bam The same aligned against the reference genome (D.melanogaster v3).

Examples

```
## Not run: vignette("RnaSeqTutorial")
```

Index

*Topic **datasets**

gAnnot, [2](#)

RnaSeqTutorial, [2](#)

Deprecated data, [1](#)

gAnnot, [2](#)

GRangesList, [2](#), [3](#)

RangedData, [2](#), [3](#)

RnaSeqTutorial, [2](#)

vignette (RnaSeqTutorial), [2](#)