

Package ‘CENTREannotation’

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Title Hub package for the annotation data of CENTRE (GENCODE v40 and SCREEN v3)

Version 0.99.1

Description This is an AnnotationHub package for the CENTRE Bioconductor software package. It contains the GENCODE version 40 annotation and ENCODE Registry of candidate cis-regulatory elements (cCREs) version 3. All for Human hg38 genome.

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Encoding UTF-8

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RoxygenNote 7.3.2

biocViews AnnotationData, AnnotationHub

Depends R (>= 4.5.0)

Imports AnnotationHub, RSQLite, DBI, BiocGenerics, methods

VignetteBuilder knitr

Suggests knitr, rmarkdown, testthat, BiocStyle

URL <https://github.com/slrvv/CENTREannotation>

BugReports <https://github.com/slrvv/CENTREannotation/issues>

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CENTREannotation-package

CENTREannotation: Hub package for the annotation data of CENTRE (GENCODE v40 and SCREEN v3)

Description

This is an AnnotationHub package for the CENTRE Bioconductor software package. It contains the GENCODE version 40 annotation and ENCODE Registry of candidate cis-regulatory elements (cCREs) version 3. All

Format

SQLite databases with GENCODE v40 and SCREEN v3 data.

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Source

https://www.genecodegenes.org/human/release_40.html <https://screen.encodeproject.org>

See Also

Useful links:

- <https://github.com/slrvv/CENTREannotation>
- Report bugs at <https://github.com/slrvv/CENTREannotation/issues>

Examples

```
library(AnnotationHub)
hub <- AnnotationHub()
eh <- query(hub, "CENTREannotation")
```

CENTREannotDb	<i>Class object for the CENTRE annotation data</i>
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Description

The CENTRE annotation data is accessed through objects of CENTREannotDb class. That either provides access to the ENCODE screen V3 annotation for Human <https://screen.encodeproject.org> or gives access to GENCODE basic gene annotation version 40.

Usage

```
CENTREannotDb(x)
```

```
tables(x)
```

Arguments

x	sqlite file path
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Details

Using tables(x) on a CENTREannotDb object returns the tables and columns for each table in the database.

Value

```
class CENTREannotDb
```

References

Based on CompoundDb::CompDb.

Examples

```
##load the screen V3 annotation
ah <- AnnotationHub::AnnotationHub()
screen <- ah[["AH116731"]]
tables(screen) #get all tables and columns in the data base
```

`fetch_data`*Fetch data from the CENTREannotDb databases*

Description

Main interface to fetch data from the CENTREannotation package databases through the CENTREannotDb objects.

Usage

```
fetch_data(x, columns, entries, column_filter)
```

Arguments

<code>x</code>	A CENTREannotDb object.
<code>columns</code>	Columns to select (vector or string). Equivalent to X in SELECT X.
<code>entries</code>	Element ID to select (vector or sting). Equivalent to ID in SELECT X FROM TABLE WHERE ID in Z. If entries or column_filter is missing the program assumes the query is SELECT X FROM TABLE.
<code>column_filter</code>	Column on which to apply filter. Equivalent to Z in SELECT X FROM TABLE WHERE ID in Z. If entries or column_filter is missing the program assumes the query is SELECT X FROM TABLE.

Value

data.frame with the queried data.

References

Based on the internal query engine of CompoundDb

Examples

```
ah <- AnnotationHub::AnnotationHub()
CENTREannotenDb <- ah[["AH116731"]]
res <- fetch_data(CENTREannotenDb,
  columns = c("enhancer_id", "start"),
  entries = c("EH38E1519134", "EH38E1519132"),
  column_filter = "enhancer_id"
)
```

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* **internal**

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