Package 'LINCSDataPortal'

August 11, 2017

Title Query LINCS project data and metadata from LINCS Data Portal

Version 0.1.0

Date 2017-08-11

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Description
    Access, query and download of data and metadata from the Library of Integrated Network-
    based Cellular Signatures (LINCS) project (http://www.lincsproject.org/).

Depends R (>= 3.2.1)

Imports httr, utils, jsonlite

License GPL-3

Encoding UTF-8

LazyData true

RoxygenNote 6.0.1.9000

R topics documented:

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cell_metadata   *Retrieve metadata associated with a cell (cl) used in LINCS experi-*
                                     ments.

Description

Retrieve metadata associated with a cell (cl) used in LINCS experiments.

Usage

```
cell_metadata(cl)
```

Arguments

cl   String representng a cell name of interest

Value

data frame with available cell metadata

Examples

```
cell_metadata("mcf7")
cell_metadata("PC-3")
```

---

datalevels   *Retrieve all available data level and associated dataset id for a given*
                                     dataset id.

Description

Retrieve all available data level and associated dataset id for a given dataset id.

Usage

```
datalevels(lds_id)
```

Arguments

lds_id   String representng a dataset id (LDS-xxxx)

Value

data frame with available data level and associated dataset id

Examples

```
datalevels("LDS-1233")
```

---

dataset_entities	*Retrieve entities (gene, protein, small molecule, etc.) associated with a specific LINCS dataset*

Description

Retrieve entities (gene, protein, small molecule, etc.) associated with a specific LINCS dataset

Usage

```
dataset_entities(lds_id)
```

Arguments

lds_id   String representing the dataset id (LDS-xxxx)

Value

list of vectors with entities, measured or used to perturb the experiment associated to a given dataset. One vector per entity type.

Examples

```
dataset_entities("LDS-1266")
dataset_entities("LDS-1173")
```

---

download_dataset	*Download LINCS dataset packages, given dataset id's, from Lincs Data Portal.*

Description

Download LINCS dataset packages, given dataset id's, from Lincs Data Portal.

Usage

```
download_dataset(lds_id, path = "./")
```

Arguments

`lds_id`	Vector of dataset ids (LDS-xxxx)
`path`	Path to local folder where the dataset package will be downloaded, default = current directory

Examples

```
## Not run:
download_dataset("LDS-1266")
download_dataset("LDS-1173", path = "/datasets")

## End(Not run)
```

`find_dataset`	*Retrieve datasets from LINCS data portal associated with a term of interest (gene, protein, small molecule)*

Description

Retrieve datasets from LINCS data portal associated with a term of interest (gene, protein, small molecule)

Usage

```
find_dataset(searchterm)
```

Arguments

`searchterm`	String representing the keyword (search term) to find LINCS datasets. Can be a cell, small molecule, protein, etc.

Value

data frame containing dataset id and description

Examples

```
find_dataset("afatinib")
find_dataset("mcf7")
```

---

gene_metadata	*Retrieve metadata associated with a gene measured in LINCS experiments.*

Description

Retrieve metadata associated with a gene measured in LINCS experiments.

Usage

```
gene_metadata(ge)
```

Arguments

ge   String representing a gene symbol of interest

Value

data frame with available gene metadata

Examples

```
gene_metadata("BRCA1")
gene_metadata("CDK1")
```

---

protein_metadata	*Retrieve metadata associated with a protein measured or used in LINCS experiments.*

Description

Retrieve metadata associated with a protein measured or used in LINCS experiments.

Usage

```
protein_metadata(pr)
```

Arguments

pr   String representing a protein name of interest

Value

data frame with available protein metadata

Examples

```
protein_metadata("ACK")
```

SM_metadata	*Retrieve metadata associated with a Small Molecule (SM) used in LINCS experiments.*

Description

Retrieve metadata associated with a Small Molecule (SM) used in LINCS experiments.

Usage

```
SM_metadata(sm)
```

Arguments

sm   String containing the name of a small molecule of interest

Value

data frame with available small molecule metadata

Examples

```
SM_metadata("afatinib")
SM_metadata("GSK-1070916")
```

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