Welcome to the KEGG.db annotation Package. The purpose of this package was to provide detailed information about the latest version of the KEGG pathway databases. But a number of years ago, KEGG changed their policy about sharing their data and so this package is no longer allowed to be current. Users who are interested in a more current pathway data are encouraged to look at the KEGGREST or reactome.db packages.

Objects in this package are accessed using the `select()` interface. See ?select in the AnnotationDbi package for details.

**See Also**

- `AnnotationDb-class` for use of `keys()`, `columns()` and `select()`.

**Examples**

```r
## select() interface:
## Objects in this package can be accessed using the select() interface
## from the AnnotationDbi package. See ?select for details.
columns(KEGG.db)
```

```r
## Bimap interface:
## The 'old style' of interacting with these objects is manipulation as
## bimaps. While this approach is still available we strongly encourage the
## use of select().
ls("package:KEGG.db")
```
KEGGENZYMEID2GO

An annotation data object that maps Enzyme Commission numbers to Gene Ontology identifiers

Description

KEGGENZYMEID2GO maps Enzyme Commission numbers to Gene Ontology (GO) identifiers

Details

This is an R object containing key and value pairs. Keys are Enzyme Commission numbers and values are GO identifiers. Values are vectors of length 1. Enzyme Commission numbers that cannot be mapped to a GO term are assigned a value NA.

Mappings were based on data provided by: Gene Ontology External Link http://www.geneontology.org/external2go
With a date stamp from the source of: 2015-Sepec2go27

References


See Also

• AnnotationDb-class for use of the select() interface.

Examples

## select() interface:
## Objects in this package can be accessed using the select() interface
## from the AnnotationDbi package. See ?select for details.

## Bimap interface:
xx <- as.list(KEGGENZYMEID2GO)
if(length(xx) > 0){
  # Get the value of the first key
  xx[[1]]
  # Get values for a few keys
  if(length(xx) >= 3)
    xx[1:3]
}

KEGGEXTID2PATHID

An annotation data object that maps Entrez Gene or Open Reading Frame identifiers KEGG pathway identifiers

Description

KEGGEXTID2PATHID maps Entrez Gene (for human, mouse, and rat) and Open Reading Frame (for yeast) identifiers to KEGG pathway identifiers.
Details

This is an R object containing key and value pairs. Keys are Entrez Gene identifiers for human, mouse, and rat and Open Reading Frame (ORF) identifiers for yeast and values are the corresponding KEGG pathway identifiers. Values are vectors of length 1 or greater depending on whether a given external identifier can be mapped to only one or more KEGG pathway identifiers. NAs are assigned to Entrez Gene or ORF identifiers that can not be mapped to any pathway identifier.

KEGG pathway identifiers are the identifiers used by KEGG for various pathways.

Mappings between KEGG pathway identifiers and pathway names can be obtained through another annotation data object named KEGGPATHID2NAME.

Mappings were based on data provided by: KEGG GENOME ftp://ftp.genome.jp/pub/kegg/ genomes
With a date stamp from the source of: 2011-Mar15

References


See Also

• AnnotationDb-class for use of the select() interface.

Examples

## select() interface:
## Objects in this package can be accessed using the select() interface
## from the AnnotationDbi package. See ?select for details.

## Bimap interface:
xx <- as.list(KEGGEXTID2PATHID)
if(length(xx) > 0){
  # Get the value of the first key
  xx[[1]]
  # Get the values for multiget for a few keys
  if(length(xx) >= 3){
    xx[1:3]
  }
}

KEGGGO2ENZYMEID

An annotation data object that maps Gene Ontology (GO) identifiers to Enzyme Commission numbers

Description

KEGGGO2ENZYMEID maps GO identifiers to Enzyme Commission numbers

Details

This is an R object containing key and value pairs. Keys are GO identifiers and values are Enzyme Commission numbers. Values are vectors of length 1. GO identifiers can not be mapped to any Enzyme Commission number are assigned NAs.

Mappings are based on data provided by: Gene Ontology External Link http://www.geneontology.org/external2go
With a date stamp from the source of: 2015-Sepec2go27
References


See Also

• AnnotationDb-class for use of the select() interface.

Examples

## select() interface:
## Objects in this package can be accessed using the select() interface
## from the AnnotationDbi package. See ?select for details.

## Bimap interface:
xx <- as.list(KEGGGO2ENZYMEID)
if(length(xx) > 0){
  # Get the value of the first key
  xx[[1]]
  # Get values for a few keys
  if(length(xx) >= 3){
    xx[1:3]
  }
}

KEGGMAPCOUNTS

<table>
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<th>KEGGMAPCOUNTS</th>
<th>Number of mapped keys for the maps in package KEGG.db</th>
</tr>
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Description

KEGGMAPCOUNTS provides the "map count" (i.e. the count of mapped keys) for each map in package KEGG.db.

Details

This "map count" information is precalculated and stored in the package annotation DB. This allows some quality control and is used by the checkMAPCOUNTS function defined in AnnotationDbi to compare and validate different methods (like count.mappedkeys(x) or sum(!is.na(as.list(x)))) for getting the "map count" of a given map.

See Also

• mappedkeys,
• count.mappedkeys,
• checkMAPCOUNTS
• AnnotationDb-class for use of the select() interface.
 KEPPATHID2EXTID

Examples

## select() interface:
## Objects in this package can be accessed using the select() interface
## from the AnnotationDbi package. See ?select for details.

## Bimap interface:
KEGGMAPCOUNTS
mapnames <- names(KEGGMAPCOUNTS)
KEGGMAPCOUNTS[mapnames[1]]
x <- get(mapnames[1])
sum(!is.na(as.list(x)))
count.mappedkeys(x)  # much faster!

## Check the "map count" of all the maps in package KEGG.db
checkMAPCOUNTS("KEGG.db")

---

KEGGPATHID2EXTID  
An annotation data object that maps KEGG pathway identifiers to Entrez Gene or Open Reading Frame identifiers.

Description

KEGGPATHID2EXTID maps KEGG pathway identifiers to Entrez Gene (for human, mouse, and rat) or Open Reading Frame (for yeast) identifiers.

Details

This is an R object containing key and value pairs. Keys are KEGG pathway identifiers and values are Entrez Gene identifiers for human, mouse, and rat or Open Reading Frame (ORF) identifiers for yeast. Values are vectors of length 1 or greater depending on whether a pathway identifier can be mapped to one or more Entrez Gene or ORF identifiers. NAs are assigned to KEGG pathway identifiers that can not be mapped to any Entrez Gene or ORF identifiers.

KEGG pathway identifiers are the identifiers used by KEGG for various pathways.

Mappings between KEGG pathway identifiers and pathway names can be obtained through another annotation data object named KEGGPATHID2NAME.

Mappings were based on data provided by: KEGG GENOME ftp://ftp.genome.jp/pub/kegg/genomes
With a date stamp from the source of: 2011-Mar15

References


See Also

- AnnotationDb-class for use of the select() interface.
Examples

```r
## select() interface:
## Objects in this package can be accessed using the select() interface
## from the AnnotationDbi package. See ?select for details.
##
## Bimap interface:
xx <- as.list(KEGGPATHID2EXTID)
if(length(xx) > 0){
  # Get the value of the first key
  xx[[1]]
  # Get the values for multi get for a few keys
  if(length(xx) >= 3){
    xx[1:3]
  }
}
```

KEGGPATHID2NAME

An annotation data object that maps KEGG pathway identifiers to KEGG pathway names

Description

KEGGPATHID2NAME maps KEGG pathway identifiers to pathway names used by KEGG for various pathways

Details

This is an R object containing key and value pairs. Keys are KEGG pathway identifiers and values are pathway names. Values are vectors of length 1.

Mappings were based on data provided by: KEGG PATHWAY ftp://ftp.genome.jp/pub/kegg/pathway With a date stamp from the source of: 2011-Mar15

References


See Also

- AnnotationDb-class for use of the select() interface.

Examples

```r
## select() interface:
## Objects in this package can be accessed using the select() interface
## from the AnnotationDbi package. See ?select for details.
##
## Bimap interface:
xx <- as.list(KEGGPATHID2NAME)
if(length(xx) > 0){
  # get the value for the first key
  xx[[1]]
  # Get the values for a few keys
  if(length(xx) >= 3){
```
KEGGPATHNAME2ID

xx[1:3]
)
)

KEGGPATHNAME2ID  An annotation data object that maps KEGG pathway names to identifiers for the corresponding pathway names used by KEGG

Description

KEGGPATHNAME2ID maps KEGG pathway names to pathway identifiers used by KEGG for various pathways

Details

This is an R object containing key and value pairs. Keys are KEGG pathway names and values are pathway identifiers. Values are vectors of length 1.

Mappings were based on data provided by: KEGG PATHWAY ftp://ftp.genome.jp/pub/kegg/pathway
With a date stamp from the source of: 2011-Mar15

References


See Also

- AnnotationDb-class for use of the select() interface.

Examples

```r
## select() interface:
## Objects in this package can be accessed using the select() interface
## from the AnnotationDbi package. See ?select for details.

## Bimap interface:
x <- as.list(KEGGPATHNAME2ID)
if(length(x) > 0){
  # get the value for the first key
  x[[1]]
  # Get the values for a few keys
  if(length(x) >= 3){
    x[1:3]
  }
}
```
KEGG_dbconn

Collect information about the package annotation DB

Description
Some convenience functions for getting a connection object to (or collecting information about) the package annotation DB.

Usage
KEGG_dbconn()
KEGG_dbfile()
KEGG_dbschema(file="", show.indices=FALSE)
KEGG_dbInfo()

Arguments
file
A connection, or a character string naming the file to print to (see the file argument of the cat function for the details).

show.indices
The CREATE INDEX statements are not shown by default. Use show.indices=TRUE to get them.

Details
KEGG_dbconn returns a connection object to the package annotation DB. IMPORTANT: Don’t call dbDisconnect on the connection object returned by KEGG_dbconn or you will break all the AnnDbObj objects defined in this package!

KEGG_dbfile returns the path (character string) to the package annotation DB (this is an SQLite file).

KEGG_dbschema prints the schema definition of the package annotation DB.

KEGG_dbInfo prints other information about the package annotation DB.

Value
KEGG_dbconn: a DBIConnection object representing an open connection to the package annotation DB.
KEGG_dbfile: a character string with the path to the package annotation DB.
KEGG_dbschema: none (invisible NULL).
KEGG_dbInfo: none (invisible NULL).

See Also
dbGetQuery, dbConnect, dbconn, dbfile, dbschema, dbInfo
Examples

```r
library(DBI)
## Count the number of rows in the "pathway2name" table:
dbGetQuery(KEGG_dbconn(), "SELECT COUNT(*) FROM pathway2name")

KEGG_dbschema()

KEGG_dbInfo()
```
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