Package ‘goTools’

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Description Wrapper functions for description/comparison of oligo ID list using Gene Ontology database
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R topics documented:

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EndNodeList Reference GO nodes list.

Description

The function EndNodeList builds the default end node list used in ontoCompare. CustomEndNodeList helps you build a list of children nodes starting from a GO id of interest.
Usage

EndNodeList()
CustomEndNodeList(id, rank=1)

Arguments

id       Valid GO id: "GO:XXXXXXX".
rank     Number of levels of children of the GO DAG under id you want to add to your
         nodes list.

Value

EndNodeList returns a vector of all GO ids 1 level below MF("GO:0003674"), BP("GO:0008150")
and CC("GO:0005575"). MF, BP and CC nodes are included. CustomEndNodeList returns a vector
of all GO ids children of id, rank levels below it.

Author(s)

Yee Hwa (Jean) Yang, Agnes Paquet

See Also

ontoCompare

Examples

## Examples use the probeID dataset. For description type ? probeID.
## library(GO.db)
## EndNodeList()
## MFendnode <- CustomEndNodeList("GO:0003674", rank=2)

## Example (not run)
## data(probeID)
## ontoCompare(affylist, probeType="hgu133a", endnode=MFendnode, goType="MF")

Description

This functions will allow you to describe and compare sets of oligo ids using Gene Ontology
database

Usage

ontoCompare(genelist, probeType=c("GO","hgu133a"),
goType="All", endnode, method=c("TGenes", "TIDS", "none"), plot=FALSE, ...
)

ontoPlot(objM, names.arg=NULL, beside=TRUE, las=2, legend.text=TRUE, ...)
Arguments

**genelist**
- list of list of valid probe ids.

**method**
- method used to evaluate the percentage of oligos for each end-node. 'TGenes' = for each end node, return the number of direct children found / total number of probe ids. (default). This includes oligos which do not have GO annotations. 'TIDS' = for each end node, return the number of direct children found / total number of GO ids describing the list. 'none' = for each end node, return the number of direct children found.

**probeType**
- type of input given to the function. Valid probe types include GO ids and any probes ids for which a BioC annotation package providing a mapping to GO is available. ontoCompare is expecting valid probe ids.

**goType**
- help sort the data by type. If 'All' (default), all oligos are taken into account. 'BP' restricts information to Biological Process, 'CC' to Cellular Component, and 'MF' to Molecular Function.

**plot**
- logical: if 'TRUE', results are output as a graph.

**endnode**
- list of GO ids corresponding to end-nodes of interest.

**beside**
- Logical. If 'TRUE', the bars of the barplot are portrayed as juxtaposed bars. See ?barplot for more details.

**las**
- numeric: if las=2, the axis labels are displayed perpendicular to the axis. See ?par for more details.

**legend.text**
- vector of text used to construct a legend for the plot. See ?barplot for more details.

**objM**
- results from ontoCompare.

**names.arg**
- Labels to use in ontoPlot.

**...**
- extra layout parameters to be passed to ontoPlot.

Value

Returns the percentage of probes children of nodes contained in endnode. If 'plot' = TRUE, results are plotted as a pie chart or a bargraph.

Author(s)

Yee Hwa (Jean) Yang, Agnes Paquet

Examples

```r
# Examples use the probeID dataset. For description type ?probeID.
# Not run

#library(GO.db)
data(probeID)
#ontoCompare(affylist, probeType="hgu133a", plot=TRUE)
#res <- ontoCompare(operonlist["L1"], probeType="operon", method="TIDS")
#ontoPlot(res, cex=0.7)
```
### Description

Internal goTools functions

### Details

These are not to be called by the user.

<table>
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<tr>
<th>probeID</th>
<th>List of probe ids from Affymetrix hgu133a chip and Operon Version 2 Human oligos</th>
</tr>
</thead>
</table>

### Description

The `probeID` dataset consists of two lists of randomly chosen probe IDs. `affylist` contains 3 sets of ids from Affymetrix hgu133a. `operonlist` contains 2 sets of ids from Operon Version 2.

### Usage

```r
data(probeID)
```
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