

test_gsea

```
library(DOSE)
```

```
##
```

```
## DOSE v3.21.1 For help: https://yulab-smu.top/biomedical-knowledge-mining-book/
```

```
##
```

```
## If you use DOSE in published research, please cite:
```

```
## Guangchuang Yu, Li-Gen Wang, Guang-Rong Yan, Qing-Yu He. DOSE: an R/Bioconductor package
```

```
data(geneList)
```

```
geneList2 <- sort(geneList)
```

```
geneList3 <- sample(geneList)
```

```
set.seed(123)
```

```
gsedo <- gseD0(geneList)
```

```
## preparing geneSet collections...
```

```
## GSEA analysis...
```

```
## leading edge analysis...
```

```
## done...
```

```
set.seed(123)
```

```
gsedo2 <- gseD0(geneList2)
```

```
## preparing geneSet collections...
```

```
## GSEA analysis...
```

```
## leading edge analysis...
```

```
## done...
```

```
set.seed(123)
gsedo3 <- gseD0(geneList3)
```

```
## preparing geneSet collections...
```

```
## GSEA analysis...
```

```
## leading edge analysis...
```

```
## done...
```

```
head(gsedo)
```

##	ID	Description	setSize			
##	DOID:0050338	DOID:0050338 primary bacterial infectious disease	214			
##	DOID:104	DOID:104 bacterial infectious disease	243			
##	DOID:399	DOID:399 tuberculosis	140			
##	DOID:3905	DOID:3905 lung carcinoma	465			
##	DOID:2237	DOID:2237 hepatitis	389			
##	DOID:4362	DOID:4362 cervical cancer	100			
##	enrichmentScore	NES	pvalue	p.adjust	qvalues	
##	DOID:0050338	0.4569856	2.073812	4.938358e-10	4.009947e-07	2.697903e-07
##	DOID:104	0.4286201	1.954960	2.244349e-09	9.112055e-07	6.130615e-07
##	DOID:399	0.4999969	2.170496	1.856364e-08	5.024559e-06	3.380537e-06
##	DOID:3905	0.3305049	1.622570	1.999364e-07	4.058709e-05	2.730711e-05
##	DOID:2237	0.3429598	1.654023	5.554863e-07	9.021098e-05	6.069419e-05
##	DOID:4362	0.5037048	2.074096	9.868949e-07	1.335598e-04	8.985938e-05
##	rank	leading_edge				

```
## D0ID:0050338 1850 tags=35%, list=15%, signal=30%
## D0ID:104      1808 tags=32%, list=14%, signal=28%
## D0ID:399     1808 tags=36%, list=14%, signal=31%
## D0ID:3905   1672 tags=23%, list=13%, signal=20%
## D0ID:2237   2082 tags=27%, list=17%, signal=23%
## D0ID:4362   1988 tags=35%, list=16%, signal=30%
##
## D0ID:0050338
## D0ID:104
## D0ID:399
## D0ID:3905           4312/6280/2305/9133/6279/7153/6278/6241/55165/11065/8140/10232/332
## D0ID:2237           3627/9582/3669/6373/4283/7850/332/3002/3620/4171/1033/6364/5347/4318/50
## D0ID:4362
```

```
head(gsedo2)
```

```
##              ID              Description setSize
## D0ID:0050338 D0ID:0050338 primary bacterial infectious disease      214
## D0ID:104      D0ID:104      bacterial infectious disease      243
## D0ID:399      D0ID:399      tuberculosis                        140
## D0ID:3905     D0ID:3905     lung carcinoma                      465
## D0ID:2237     D0ID:2237     hepatitis                          389
## D0ID:4362     D0ID:4362     cervical cancer                    100
##              enrichmentScore    NES      pvalue    p.adjust    qvalues
## D0ID:0050338    0.4569856 2.073812 4.938358e-10 4.009947e-07 2.697903e-07
## D0ID:104        0.4286201 1.954960 2.244349e-09 9.112055e-07 6.130615e-07
## D0ID:399        0.4999969 2.170496 1.856364e-08 5.024559e-06 3.380537e-06
## D0ID:3905      0.3305049 1.622570 1.999364e-07 4.058709e-05 2.730711e-05
## D0ID:2237      0.3429598 1.654023 5.554863e-07 9.021098e-05 6.069419e-05
## D0ID:4362      0.5037048 2.074096 9.868949e-07 1.335598e-04 8.985938e-05
##              rank              leading_edge
## D0ID:0050338 1851 tags=35%, list=15%, signal=30%
## D0ID:104     1809 tags=32%, list=14%, signal=28%
## D0ID:399     1809 tags=36%, list=14%, signal=31%
```

```
## D0ID:3905    1673 tags=23%, list=13%, signal=20%
## D0ID:2237    2083 tags=27%, list=17%, signal=23%
## D0ID:4362    1989 tags=35%, list=16%, signal=30%
##
## D0ID:0050338
## D0ID:104
## D0ID:399
## D0ID:3905    3569/5329/1890/7124/55210/5604/4282/945/1786/5467/929/3732/999/583
## D0ID:2237    7133/356/655/2833/9021/60489/64778/164/1959/2213/1956/7039/3820/3119/30
## D0ID:4362
```

```
head(gsedo3)
```

```
##          ID          Description setSize
## D0ID:0050338 D0ID:0050338 primary bacterial infectious disease    214
## D0ID:104      D0ID:104      bacterial infectious disease    243
## D0ID:399      D0ID:399      tuberculosis                    140
## D0ID:3905     D0ID:3905     lung carcinoma                  465
## D0ID:2237     D0ID:2237     hepatitis                       389
## D0ID:4362     D0ID:4362     cervical cancer                 100
##          enrichmentScore    NES      pvalue    p.adjust    qvalues
## D0ID:0050338    0.4569856  2.073812  4.938358e-10  4.009947e-07  2.697903e-07
## D0ID:104        0.4286201  1.954960  2.244349e-09  9.112055e-07  6.130615e-07
## D0ID:399        0.4999969  2.170496  1.856364e-08  5.024559e-06  3.380537e-06
## D0ID:3905       0.3305049  1.622570  1.999364e-07  4.058709e-05  2.730711e-05
## D0ID:2237       0.3429598  1.654023  5.554863e-07  9.021098e-05  6.069419e-05
## D0ID:4362       0.5037048  2.074096  9.868949e-07  1.335598e-04  8.985938e-05
##          rank          leading_edge
## D0ID:0050338  8626 tags=82%, list=69%, signal=26%
## D0ID:104      8217 tags=70%, list=66%, signal=24%
## D0ID:399      5387 tags=50%, list=43%, signal=29%
## D0ID:3905    11203 tags=92%, list=90%, signal=10%
## D0ID:2237    9246 tags=79%, list=74%, signal=21%
## D0ID:4362    9662 tags=82%, list=77%, signal=19%
```

##

D0ID:0050338

D0ID:104

D0ID:399

D0ID:3905 1475/10395/362/6280/2139/3691/3146/7852/55165/11065/940/5037/10631/1118

D0ID:2237

D0ID:4362