Package 'SASOM'

September 17, 2020

Type Package

Title What the Package Does (Title Case)

Version 0.1.0

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Description Test for association between a set of somatic mutations and multinomial outcomes by using score statistics.

Depends CompQuadForm, nnet

License LGPL (>= 2.0)

Encoding UTF-8

LazyData true

RoxygenNote 7.1.1

R topics documented:

SASOM *SASOM*

Description

Test for association between a set of somatic mutations and multinomial outcomes.

Usage

```
SASOM(y, X, G, W, rlevel)
```

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Arguments

y	a matrix or a factor vector. When a matrix is given, each row represents a subject, each column corresponds to a subtype. A subject must belong to one of the subtypes, i.e. each row sums up to 1. When a vector is given, each element corresponds to the assignment of subtype for each subject.
X	a covariant matrix, each row represents a subject.
G	a variant matrix, each row represents a subject.
W	a variant character matrix, each row represents a genome character, each column represents a variant. The column number of W is equal to the row number of G.
rlevel	reference level, rlevel must be a number if y is a matrix or a factor when y is a vector.

Value

pval.theta	p-value for testing the fixed variant effect.
pval.tau	p-value for testing the random variant effect.
p.fisher	overall p-value for testing the association between a set of somatic mutations and outcomes. It combines pval.theta and pval.tau by using Fisher's procedure.
pval.tippet	overall p-value for testing the association between a set of somatic mutations and outcomes. It combines pval.theta and pval.tau by using Tippet's procedure.
pval.dapc	overall p-value for testing the association between a set of somatic mutations and outcomes. It combines pval.theta and pval.tau by using DAPC procedure.

Author(s)

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Examples

```
data("SASOM.data")
attach(SASOM.data)
out = SASOM(y, X, G, W, rlevel)
out
detach(SASOM.data)
```

SASOM.data	*SASOM.data*

Description

A numerical data example for SASOM.

Usage

```
data(SASOM.data)
```

Format

A list contains the following objects:

y a numeric matrix of multinomial outcomes. Each row represent a subject and each subject belongs to one of the three subtypes.

X a numeric matrix of covariates (including intercept).

G a numeric matrix of variant.

W a numeric matrix of variant character.

rlevel a numeric number indicating the reference level.

Examples

```
data("SASOM.data")
```

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