

Package ‘ChernoffDist’

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Type Package

Title Chernoff's Distribution

Version 0.1.0

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Description Computes Chernoff's distribution based on the method in Piet Groenboom & Jon A Wellner (2001) Computing Chernoff's Distribution, Journal of Computational and Graphical Statistics, 10:2, 388-400, <[doi:10.1198/10618600152627997](https://doi.org/10.1198/10618600152627997)>. Chernoff's distribution is defined as the distribution of the maximizer of the two-sided Brownian motion minus quadratic drift. That is, $Z = \operatorname{argmax} (B(t) - t^2)$.

License GPL-3

Encoding UTF-8

RoxygenNote 7.2.3

Imports gsl

NeedsCompilation no

Repository CRAN

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Contents

dChern	2
pChern	2
qChern	3
Index	4

dChern	<i>Density function of Chernoff's distribution</i>
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Description

Computes the density of Chernoff's distribution.

Usage

```
dChern(x)
```

Arguments

x evaluation point of the density.

Value

The function returns Chernoff's density evaluated at x.

Examples

```
dChern(0)
```

pChern	<i>Cumulative distribution function of Chernoff's distribution</i>
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Description

Computes the CDF of Chernoff's distribution.

Usage

```
pChern(q)
```

Arguments

q evaluation point of the distribution function.

Value

The function returns Chernoff's distribution function evaluated at q.

Examples

```
pChern(0)
```

`qChern`*Quantile function of Chernoff's distribution*

Description

Computes the quantiles of Chernoff's distribution.

Usage

```
qChern(p)
```

Arguments

`p` evaluation point of the quantile function.

Value

The function returns Chernoff's quantile function evaluated at `p`.

Examples

```
qChern(0.5)
```

Index

dChern, [2](#)

pChern, [2](#)

qChern, [3](#)