

Package ‘eds’

September 21, 2024

Title eds: Low-level reader for Alevin EDS format

Version 1.7.0

Description This packages provides a single function, readEDS.

This is a low-level utility for reading in Alevin EDS format into R.

This function is not designed for end-users but instead the package is predominantly for simplifying package dependency graph for other Bioconductor packages.

Depends Matrix

Imports Rcpp

Suggests knitr, tximportData, testthat (>= 3.0.0)

LinkingTo Rcpp

SystemRequirements C++11

License GPL-2

Encoding UTF-8

URL <https://github.com/mikelove/eds>

biocViews Sequencing, RNASeq, GeneExpression, SingleCell

VignetteBuilder knitr

LazyData true

RoxygenNote 7.1.2

Config/testthat/edition 3

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readEDS

*A low-level utility function for quickly reading in Alevin EDS format***Description**

This provides a simple utility for reading in EDS format. Note that most users will prefer to use tximport or tximeta. This function and package exist in order to simplify the dependency graph for other packages.

Usage

```
readEDS(numOfGenes, numOfOriginalCells, countMatFilename, tierImport = FALSE)
```

Arguments

numOfGenes	number of genes
numOfOriginalCells	
	number of cells
countMatFilename	
	pointer to the EDS file, quants_mat.gz
tierImport	whether the countMatFilename refers to a quants tier file

Value

a genes x cells sparse matrix, of the class dgCMatrx

Examples

```
# point to files
dir0 <- system.file("extdata", package="tximportData")
samps <- list.files(file.path(dir0, "alevin"))
dir <- file.path(dir0, "alevin", samps[3], "alevin")
quant.mat.file <- file.path(dir, "quants_mat.gz")
barcode.file <- file.path(dir, "quants_mat_rows.txt")
gene.file <- file.path(dir, "quants_mat_cols.txt")

# readEDS() requires knowing the number of cells and genes
cell.names <- readLines(barcode.file)
gene.names <- readLines(gene.file)
num.cells <- length(cell.names)
num.genes <- length(gene.names)

# reading in the sparse matrix
mat <- readEDS(numOfGenes=num.genes,
               numOfOriginalCells=num.cells,
               countMatFilename=quant.mat.file)
```

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