

Package ‘proteomicsCV’

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Type Package

Title Calculates the Percentage CV for Mass Spectrometry-Based Proteomics Data

Version 0.4.0

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Description Calculates the percentage coefficient of variation (CV) for mass spectrometry-based proteomic data. The CV can be calculated with the traditional formula for raw (non log transformed) intensity data, or log transformed data.

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Encoding UTF-8

Imports stats

RoxygenNote 7.3.2

NeedsCompilation no

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Repository CRAN

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Description

Calculates the percentage CV for intensity based proteomic data.

Usage

```
protLogCV(logData, base)  
protCV(data)
```

Arguments

data	input dataframe of the intensity values.
logData	input dataframe of the log transformed intensity values.
base	numerical base of the logarithm that was used to transform the data. Values that are accepted are 2 (for log2) and 10 (for log10)

Value

returns a list containing the percentage CVs

Author(s)

Alejandro J. Brenes

References

<https://www.biorxiv.org/content/10.1101/2024.09.11.612398v1>

Examples

```
library(proteomicsCV)  
log_intensity_df<-data.frame(intensity1=c(16.93157,26.57542,19.90749,18.86056),  
                             intensity2=c(17.16546,27.77706,19.45854,19.60721),  
                             intensity3=c(17.04260,27.21697,19.70314,16.19530),  
                             intensity4=c(17.08473,26.99766,17.93342,17.97693))  
  
# log formula with the data already transformed to log2  
cvs<-protLogCV(log_intensity_df, 2)  
# log formula with the data not log transformed  
not_log_intensity_df<-data.frame(intensity1=c(125000,100000000,983450,475987),  
                                intensity2=c(147000,230000000,720450,798656),  
                                intensity3=c(135000,156000000,853566,75036),  
                                intensity4=c(139000,134000000,250321,257986))  
# base formula with raw intensity (no log transformation)  
raw_cvs<-protCV(not_log_intensity_df)
```

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