Code for DiffProt

Description

The R file $\mathrm{DiffProt}$ contains code for the detection of differentially expressed proteins.

Usage

$\mathrm{DiffProt}$ (Pijk,PCT,muPct,muTau,a,b,vartau,alpha)

Input Arguments

Pijk	Matrix containing the protein intensities of the treatment group. Each row corresponds to a different protein and each column to a different sample.
PCT	Matrix containing the protein intensities of the control group. Each row corresponds to a different protein and each column to a different sample.
muPct	(prior hyperparameter) mean for the mean protein intensiy parameter
muTau	(prior hyperparameter) mean of the treatment effect
a	(prior hyperparameter) location parameter for the variance (noise)
b	(prior hyperparameter) scale parameter for the variance (noise)
vartau	(prior hyperparameter) variance for the treatment effect
alpha	level of statistical significance

Output Arguments

Results	Matrix containing the differentially expressed proteins at alpha level of statistical significance.
Results$Proteins	Protein name
Results$Probability	Posterior probability
Results$Fold.Change	log2 foldchange. When in one group all the intensities are zero. Then the log2 foldchange is INF.
Results$Score	multiplication between probability x absolute value of (log2 fold change)