pwrEWAS.data: Reference data accompanying pwrEWAS

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Abstract

This package provides reference data required for pwrEWAS. pwrEWAS is a user-friendly tool to estimate power in EWAS as a function of sample and effect size for two-group comparisons of DNAm (e.g., case vs control, exposed vs non-exposed, etc.).

Package

pwrEWAS.data 1.6.0

Contents

Data

The following data sets were used to create the reference data. Therefore, for each tissue type CpG-specific means and variances were estimated ($\hat{\mu}_j = 1/N \sum_{i=1}^{N} \beta_{i,j}$ and $\sigma_j^2 = 1/(N-1) \sum_{i=1}^{N} (\beta_{i,j} - \hat{\mu}_j)^2$), where $\beta_{i,j}$ represents the methylation β-value for CpG j={1,..,J} in subject i={1,..,N}.

Tissue Type	Accession Number	Subjects within GSE-ID limited to	Reference
Saliva	GSE92767		(Hong et al., 2017)
Lymphoma	GSE42372	disease state: non-HIV lymphoma	(Matsunaga et al., 2014)
Placenta	GSE62733	health state: Normal	(Kawai et al., 2015)
Liver	GSE61258	diseasestatus: Control	(Horvath et al., 2014)
Colon	GSE77718	disease state: Normal	(McInnes et al., 2017)
Blood (Adults)	GSE42861	subject: Normal	(Kular et al., 2018; Y. Liu et al., 2013)
Blood (Children)	GSE83334	age: 5 years	(Urdinguio et al., 2016)
Blood (Newborns)	GSE82273		(Markunas et al., 2016)
Cord-blood (whole blood)	GSE69176		
Cord-blood (PBMC)	GSE110128	cord blood	(Langie et al., 2018)
Adult (PBMC)	GSE67170	disease state: control	(Y. H. Zhang et al., 2018)
Sperm	GSE114753	control	(Jenkins et al., 2017)