

# Package 'PWMErich.Mmusculus.background'

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**Maintainer** Robert Stojnic <robert.stojnic@gmail.com>

**License** GPL-3

**Title** M. musculus background for PWMErich

**Type** Package

**LazyLoad** yes

**Author** Robert Stojnic

**Description** PWMErich pre-compiled background objects for M.musculus (mouse) and MotifDb M. musculus motifs.

**Version** 0.99.1

**biocViews** AnnotationData, Organism, Mus\_musculus

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**Depends** R (>= 2.10), methods, PWMErich

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PWMErich.Mmusculus.background-package

*PWMErich.Mmusculus.background package overview*

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**Description**

This package provides a set of pre-compiled genomic background files for the PWMErich package and *M. musculus* (mouse). The backgrounds were pre-compiled using unique 2kb promoters in mouse.

- MotifDb.Mmus.PFM - a list of position frequency matrices (PFMs) from MotifDb
- MotifDb.Mmus - the corresponding PWMs generated by using the background frequencies of A,C,G,T in a set of 2kb mouse (mm9) promoters.
- PWMLogn.mm9.MotifDb.Mmus - pre-compiled threshold-free lognormal background for MotifDb mouse PWMs. The lognormal distribution is fitted to 500bp chunks of 2kb mouse (mm9) promoters.
- PWMcutoff4.mm9.MotifDb.Mmus, PWMcutoff5.mm9.MotifDb.Mmus - pre-compiled Z-score background with cutoff of 4 and 5 (base e) for MotifDb mouse PWMs. The number of hits is counted in 2kb mouse (mm9) promoters.
- PWMPvaluecutoff1e2.mm9.MotifDb.Mmus, PPWMPvaluecutoff1e3.mm9.MotifDb.Mmus, PPWMPvaluecutoff1e4.mm9.MotifDb.Mmus - pre-compiled Z-score background with P-value cutoff of 0.01, 0.001, and 0.0001 for MotifDb mouse PWMs. The number of hits with smaller P-value than cutoff is counted in 2kb mouse (mm9) promoters.

**Usage**

```
data(MotifDb.Mmus.PFM)
data(MotifDb.Mmus)
data(PWMLogn.mm9.MotifDb.Mmus)
data(PWMcutoff4.mm9.MotifDb.Mmus)
data(PWMcutoff5.mm9.MotifDb.Mmus)
data(PWMPvaluecutoff1e2.mm9.MotifDb.Mmus)
data(PWMPvaluecutoff1e3.mm9.MotifDb.Mmus)
data(PWMPvaluecutoff1e4.mm9.MotifDb.Mmus)
```

**Details**

All of these objects were created with the appropriate functions available in the PWMErich package (see Section 'See also'). We recommend using these functions to generate backgrounds for a custom set of background sequences and/or DNA motifs.

**Author(s)**

Robert Stojnic  
Cambridge Systems Biology Centre  
University of Cambridge, UK  
Maintainer: Robert Stojnic <robert.stojnic@gmail.com>

**See Also**

[makeBackground](#), [makePWMLognBackground](#), [makePWMCutoffBackground](#), [makePWMEmpiricalBackground](#).

**Examples**

```
data(PWMLogn.mm9.MotifDb.Mmus)
```

```
res = motifEnrichment(DNAString("TGCATCAAGTGTAGTGCAAGTGAGTGATGAATGC"), PWMLogn.mm9.MotifDb.Mmus)
```

```
groupReport(res)[1:10]
```

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