

Package ‘nmrdata’

January 22, 2026

Type Package

Title Example 1d NMR Data for Metabolic Profiling

Version 1.0.0

Description Provides example one-dimensional proton NMR spectra of murine urine samples collected before and after bariatric or sham surgery (Roux-en-Y gastric bypass). The data are adapted from Jia V Li et al. (2011), “Metabolic surgery profoundly influences gut microbial-host metabolic cross-talk”, Gut, 60(9), 1214–1223. [doi:10.1136/gut.2010.234708](https://doi.org/10.1136/gut.2010.234708). This package serves as example data for metabolomics analysis and teaching purposes.

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Encoding UTF-8

LazyData false

Roxygen list(markdown = TRUE)

RoxygenNote 7.3.3

Imports ExperimentHub,

Suggests BiocStyle, knitr, rmarkdown

VignetteBuilder knitr

biocViews ExperimentHub, ExperimentData

BugReports <https://github.com/tkimhofer/nmrdata/issues>

URL <https://github.com/tkimhofer/nmrdata>

git_url <https://git.bioconductor.org/packages/nmrdata>

git_branch RELEASE_3_22

git_last_commit a43e0c7

git_last_commit_date 2025-10-29

Repository Bioconductor 3.22

Date/Publication 2026-01-22

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getRawExpDir	<i>Unpack and return path to raw NMR experiment directory</i>
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Description

Retrieves the raw NMR experiment archive (tar.gz) from ExperimentHub and ensures it is unpacked once into a cache directory. If the unpacked directory already exists and contains files, it is reused; otherwise the tarball is extracted. Optionally, an existing unpack can be forced to be replaced.

Usage

```
getRawExpDir(quiet = FALSE, reuntar = FALSE, tar_override = NULL)
```

Arguments

quiet	Logical; suppress progress messages (default FALSE).
reuntar	Logical; force re-extraction even if the directory already exists and is populated (default FALSE).
tar_override	Character path to a local .tar.gz file to use instead of ExperimentHub (for examples/tests; default NULL).

Details

This helper is idempotent: repeated calls return the same normalized path without re-downloading or re-unpacking, unless explicitly instructed.

- The function always uses the same internal ExperimentHub ID (EH9906 by default in this package).
- The tarball is retrieved via `ExperimentHub::ExperimentHub()`.
- The directory is created next to the cached tarball inside the EH cache.
- If the archive contains exactly one top-level folder, that name is reused. Otherwise a default folder name ("nmrdata") is created.

Value

A character scalar: normalized absolute path to the unpacked dataset directory inside the local ExperimentHub cache.

See Also

`ExperimentHub::ExperimentHub()`, `utils::untar()`

Examples

```
td <- tempfile(); dir.create(td)
dir.create(file.path(td, "tinydata"))
cat("ex data\n", file = file.path(td, "tinydata", "a.txt"))
tarfile <- file.path(td, "tinydata.tar.gz")
utils::tar(tarfile, files = "tinydata", compression = "gzip", tar = "internal")

p <- getRawExpDir(tar_override = tarfile, quiet = TRUE)
basename(p)          # "tinydata"
list.files(p)         # "a.txt"

## Not run:
exp_dir <- getRawExpDir()
list.files(exp_dir, recursive = TRUE)[1:5]

# Force re-unpack if you think the folder is corrupted
exp_dir <- getRawExpDir(reuntar = TRUE)

## End(Not run)
```

nmrdata

nmrdata: Example 1D NMR Data for Metabolic Profiling

Description

The **nmrdata** package provides example one-dimensional proton NMR spectra intended for code development and teaching in a metabolomics framework.

Details

Two resources are available:

- a **pre-processed dataset** for prototyping spectral and statistical analyses,
- **raw Bruker experiment folders** for I/O and processing demonstrations.

For further details, see the [nmrdata vignette](#).

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See Also

Useful links:

- <https://github.com/tkimhofer/nmrdata>
- Report bugs at <https://github.com/tkimhofer/nmrdata/issues>

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