Package 'crisprScoreData'

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Version 1.16.0

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Title Pre-trained models for the crisprScore package

Depends ExperimentHub

Imports AnnotationHub, utils

Suggests BiocStyle, knitr, rmarkdown, testthat

biocViews ExperimentHub, Homo_sapiens_Data

Description Provides an interface to access pre-trained models for on-target and off-target gRNA activity prediction algorithms implemented in the crisprScore package. Pre-trained model data are stored in the ExperimentHub database. Users should consider using the crisprScore package directly to use and load the pre-trained models.

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Encoding UTF-8

RoxygenNote 7.1.2

VignetteBuilder knitr

BugReports https://github.com/crisprVerse/crisprScoreData

URL https://github.com/crisprVerse/crisprScoreData/issues

git_url https://git.bioconductor.org/packages/crisprScoreData

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`crisprScoreData` *Pretrained models for several crisprScore prediction algorithms*

Description

Pretrained models for DeepHF and Lindel on-target prediction algorithms for Cas9 gRNA performance to be used by crisprScore package. Data were obtained using the script `inst/scripts/make-data.R`.

Usage

```
DeepWt.hdf5(metadata=FALSE)
DeepWt_T7.hdf5(metadata=FALSE)
DeepWt_U6.hdf5(metadata=FALSE)
hf_rnn_model.hdf5(metadata=FALSE)
esp_rnn_model.hdf5(metadata=FALSE)
Model_weights.pkl(metadata=FALSE)
CRISPRa_model.pkl(metadata=FALSE)
CRISPRi_model.pkl(metadata=FALSE)
RFcombined.rds(metadata=FALSE)
```

Arguments

`metadata`	`logical` value indicating whether metadata only should be returned or if the resource should be loaded. Default behavior(metadata=FALSE) loads the data.

Format

character

Value

These accessor functions return characters specifying path of the files

References

Wang, D., Zhang, C., Wang, B. et al. Optimized CRISPR guide RNA design for two high-fidelity Cas9 variants by deep learning. Nat Commun 10, 4284 (2019). https://doi.org/10.1038/s41467-019-12281-8

Wei Chen, Aaron McKenna, Jacob Schreiber, Maximilian Haeussler, Yi Yin, Vikram Agarwal, William Stafford Noble, Jay Shendure, Massively parallel profiling and predictive modeling of the outcomes of CRISPR/Cas9-mediated double-strand break repair, Nucleic Acids Research, Volume 47, Issue 15, 05 September 2019, Pages 7989–8003, https://doi.org/10.1093/nar/gkz487.

Examples

```
DeepWt.hdf5()
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