

BSgenome.Rnorvegicus.UCSC.rn4

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Rnorvegicus

Rattus norvegicus (Rat) full genome (UCSC version rn4)

Description

Rattus norvegicus (Rat) full genome as provided by UCSC (rn4, Nov. 2004) and stored in Biostrings objects.

Note

This BSgenome data package was made from the following source data files:

sequences: chromFa.tar.gz, upstream1000.fa.gz, upstream2000.fa.gz, upstream5000.fa.gz
from <http://hgdownload.cse.ucsc.edu/goldenPath/rn4/bigZips/>

AGAPS masks: all the chr*_gap.txt.gz files from <ftp://hgdownload.cse.ucsc.edu/goldenPath/rn4/database>

RM masks: <http://hgdownload.cse.ucsc.edu/goldenPath/rn4/bigZips/chromOut.tar.gz>

TRF masks: <http://hgdownload.cse.ucsc.edu/goldenPath/rn4/bigZips/chromTrf.tar.gz>

See [?BSgenomeForge](#) and the BSgenomeForge vignette (`vignette("BSgenomeForge")`) in the BSgenome software package for how to make a BSgenome data package.

Author(s)

H. Pages

See Also

[BSgenome-class](#), [DNAString-class](#), [available.genomes](#), [BSgenomeForge](#)

Examples

```
Rnorvegicus
seqlengths(Rnorvegicus)
Rnorvegicus$chr1 # same as Rnorvegicus[["chr1"]]

if ("AGAPS" %in% masknames(Rnorvegicus)) {

  ## Check that the assembly gaps contain only Ns:
  checkOnlyNsInGaps <- function(seq)
  {
    ## Replace all masks by the inverted AGAPS mask
    masks(seq) <- gaps(masks(seq)["AGAPS"])
    unique_letters <- uniqueLetters(seq)
    if (any(unique_letters != "N"))
      stop("assembly gaps contain more than just Ns")
  }

  ## A message will be printed each time a sequence is removed
  ## from the cache:
  options(verbose=TRUE)

  for (seqname in seqnames(Rnorvegicus)) {
    cat("Checking sequence", seqname, "... ")
    seq <- Rnorvegicus[[seqname]]
    checkOnlyNsInGaps(seq)
    cat("OK\n")
  }
}

## See the GenomeSearching vignette in the BSgenome software
## package for some examples of genome-wide motif searching using
## Biostrings and the BSgenome data packages:
if (interactive())
  vignette("GenomeSearching", package="BSgenome")
```

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