

BSgenome.Hsapiens.UCSC.hg19

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Homo sapiens (Human) full genome (UCSC version hg19)

Description

Homo sapiens (Human) full genome as provided by UCSC (hg19, Feb. 2009) and stored in Biostrings objects.

Note

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

sequences: chromFa.zip, upstream1000.zip, upstream2000.zip, upstream5000.zip
from <http://hgdownload.cse.ucsc.edu/goldenPath/hg19/bigZips/>
AGAPS masks: <http://hgdownload.cse.ucsc.edu/goldenPath/hg19/database/gap.txt.gz>
RM masks: <http://hgdownload.cse.ucsc.edu/goldenPath/hg19/bigZips/chromOut.tar.gz>
TRF masks: <http://hgdownload.cse.ucsc.edu/goldenPath/hg19/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)

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See Also

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

Examples

```
BSgenome.Hsapiens.UCSC.hg19
genome <- BSgenome.Hsapiens.UCSC.hg19
seqlengths(genome)
genome$chr1 # same as genome[["chr1"]]

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

  ## 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(genome)) {
    cat("Checking sequence", seqname, "... ")
    seq <- genome[[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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