BSgenome.Dmelanogaster.UCSC.dm3.masked

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Full masked genome sequences for Drosophila melanogaster (UCSC version dm3)

Description

Full genome sequences for Drosophila melanogaster (Fly) as provided by UCSC (dm3, Apr. 2006) and stored in Biostrings objects. The sequences are the same as in BSgenome.Dmelanogaster.UCSC.dm3, except that each of them has the 4 following masks on top: (1) the mask of assembly gaps (AGAPS mask), (2) the mask of intra-contig ambiguities (AMB mask), (3) the mask of repeats from Repeat-Masker (RM mask), and (4) the mask of repeats from Tandem Repeats Finder (TRF mask). Only the AGAPS and AMB masks are “active” by default.

Note

The masks in this BSgenome data package were made from the following source data files:


See ?BSgenome.Dmelanogaster.UCSC.dm3 in the BSgenome.Dmelanogaster.UCSC.dm3 package for information about how the sequences were obtained.

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.Dmelanogaster.UCSC.dm3` in the `BSgenome.Dmelanogaster.UCSC.dm3` package for information about how the sequences were obtained.
- `BSgenome` objects and the the `available.genomes` function in the `BSgenome` software package.
- `MaskedDNAString` objects in the `Biostrings` package.
- The `BSgenomeForge` vignette (`vignette("BSgenomeForge")`) in the `BSgenome` software package for how to make a `BSgenome` data package.

Examples

```r
BSgenome.Dmelanogaster.UCSC.dm3.masked
genome <- BSgenome.Dmelanogaster.UCSC.dm3.masked
seqlengths(genome)

## To get rid of the masks altogether:
unmasked(genome$chr2L)  # same as BSgenome.Dmelanogaster.UCSC.dm3$chr2L

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")
  }
}
```
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