Package 'cgdv17'

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Title Complete Genomics Diversity Panel, chr17 on 46 individuals

Version 0.8.0

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Description Complete Genomics Diversity Panel, chr17 on 46 individuals

Depends R (>= 2.15), methods, VariantAnnotation (>= 1.15.15)

Imports BiocGenerics, S4Vectors, IRanges, GenomicRanges, Biobase

Suggests parallel, GGtools, TxDb.Hsapiens.UCSC.hg19.knownGene, org.Hs.eg.db, illuminaHumanv1.db

License Artistic-2.0

LazyLoad yes

biocViews SequencingData, SNPData, BiocViews

NeedsCompilation no

R topics documented:

cgdv17-package *Complete Genomics Diversity Panel, chr17 on 46 individuals*

Description

Complete Genomics Diversity Panel, chr17 on 46 individuals, illustrating subject-specific variant sets

Details

Package:	cgdv17
Version:	0.0.9
Suggests:	
Imports:	Biobase, IRanges
Depends:	R (>= 2.14), VariantAnnotation, org.Hs.eg.db, methods
License:	Artistic 2.0
LazyLoad:	yes
biocViews:	genetics
Built:	R 2.15.0; ; 2012-03-09 12:45:57 UTC; unix

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variantGRanges	acquire a list of GRanges recording variants and locations

see vignette; CY17 is an ExpressionSet on individuals from CEU and YRI overlapping with the diversity set, popvec enumerates source populations, h1 is an exemplar VCF header structure

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countVariants *count variants in a raggedVariantSet instance*

Description

count variants in a raggedVariantSet instance

Usage

```
countVariants(rvs, delim, qthresh = 160, applier = lapply)
```

Arguments

rvs	instance of raggedVariantSet
delim	GRanges instance
qthresh	quality threshold for keeping a variant in count
applier	lapply-like function

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getRVS *acquire data for and construct a ragged variant set instance*

Description

acquire data for and construct a ragged variant set instance

Usage

```
getRVS(packname, fns2samplenames = function(x)
 gsub(".*(NA.....).*", "\\1", x))

getrd(x, id)
```

Arguments

packname	string naming package where the resources are found
fns2samplenames	function to transform filenames to sample name tokens
x	instance of raggedVariantSet
id	character to select sample

Details

currently very specialized, as the protocol for managing collections of VCF files with discrepant variant sets per subject is not clear

assumes the package has inst/rowranges where row ranges of `readVcf` results are held

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`padToReference` *create a snpStats SnpMatrix instance by padding a ragged variant set to reference alleles wherever a variant is not recorded*

Description

create a snpStats SnpMatrix instance by padding a ragged variant set to reference alleles wherever a variant is not recorded

Usage

```
padToReference(rv, gr, qthresh = 160, applier = lapply)
```

Arguments

`rv`	`raggedVariantSet` instance
`gr`	GRanges instance
`qthresh`	quality lower bound for retention of variant
`applier`	lapply like function

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raggedVariantSet-class
Class "raggedVariantSet"

Description

manage information on non-aligned variant sets from multiple VCFs

Objects from the Class

Objects can be created by calls of the form `new("raggedVariantSet", ...)`.

Slots

`filenames`: files will be held in inst/rowranges, named here

`sampleNames`: names of samples managed

Methods

[`signature(x = "raggedVariantSet", i = "ANY", j = "ANY", drop = "ANY")`: familiar subsetting syntax

sampleNames `signature(object = "raggedVariantSet")`: getter

show `signature(object = "raggedVariantSet")`: concise report

variantGRanges `signature(rvs = "raggedVariantSet", delim = "GRanges", qthresh = "missing", applier = "`
getter

variantGRanges `signature(rvs = "raggedVariantSet", delim = "GRanges", qthresh = "numeric", applier = "`
getter with quality threshold

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Examples

```
showClass("raggedVariantSet")
```

variantGRanges *acquire a list of GRanges recording variants and locations*

Description

acquire a list of GRanges recording variants and locations

Usage

```
variantGRanges(rvs, delim, qthresh = 160, applier = lapply)

variantNames(rvs, delim, qthresh=160, applier=lapply)
```

Arguments

rvs	raggedVariantSet instance
delim	GRanges instance for confinement
qthresh	lower bound on quality
applier	lapply like function

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