Package 'interacCircos'

March 31, 2025

Type Package

Title The Generation of Interactive Circos Plot

Description Implement in an efficient approach to display the genomic data, relationship, information in an interactive circular genome(Circos) plot. 'interacCircos' are inspired by 'circosJS', 'BioCircos.js' and 'NG-Circos' and we integrate the modules of 'circosJS', 'BioCircos.js' and 'NG-Circos' into this R package, based on 'htmlwidgets' framework.

Version 1.16.0

License GPL-3

Encoding UTF-8

LazyData true

Depends R (>= 4.1)

Imports RColorBrewer, htmlwidgets, plyr, methods

RoxygenNote 7.1.1

Suggests knitr, rmarkdown

VignetteBuilder knitr

biocViews Visualization

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

git_branch RELEASE_3_20

git_last_commit c6e30f2

git_last_commit_date 2024-10-29

Repository Bioconductor 3.20

Date/Publication 2025-03-31

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Contents

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arcExample   *Arc plot example data*

Description

The data is in matrix with column names

Usage

```
arcExample
```

Format

A data frame with 7 columns:

chr chromosome

start start position

end end position

color color

des description

link hyperlink

html The external html language

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bubbleExample   *Bubble plot example data*

Description

The data is in matrix with column names

Usage

bubbleExample

Format

A data frame with 8 columns:

chr chromosome

start start position

end end position

name name for description

value value

color specified color for bubble

layer layer number

html The external html language

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chord.pExample   *Example data of chord plot of circosJS*

Description

The data is in matrix with column names

Usage

chord.pExample

Format

A data frame in which each row represents the relationship from one genome position(source) to another one(target):

source_chr chromosome name of source

source_start start position of source

source_end end position of source

target_chr chromosome name of target

target_start start position of target

target_end end position of target

chordExample	*Example data of chord plot of NG-Circos*

Description

The data is in matrix with column names. The order and number is same as column, representing the same items

Usage

```
chordExample
```

Format

A data frame in which each value represents the relationship from a column to a row:

C.CK Genome 1, the name for each arc

C.NPK Genome 2, the name for each arc

GC.CK Genome 2, the name for each arc

GC.NPK Genome 2, the name for each arc

Alphaproteobacteria Genome 2, the name for each arc

Betaproteobacteria Genome 2, the name for each arc

Gammaproteobacteria Genome 2, the name for each arc

Deltaproteobacteria Genome 8, the name for each arc

Acidobacteria Genome 9, the name for each arc

Actinobacteria Genome 10, the name for each arc

Bacteroidetes Genome 11, the name for each arc

Chloroflexi Genome 12, the name for each arc

Firmicutes Genome 13, the name for each arc

Gemmatimonadetes Genome 14, the name for each arc

Planctomycetes Genome 15, the name for each arc

Thaumarchaeota Genome 16, the name for each arc

Verrucomicrobia Genome 17, the name for each arc

Ascomycota Genome 18, the name for each arc

Basidiomycota Genome 19, the name for each arc

Zygomycota Genome 20, the name for each arc

Circos   *interacCircos*

Description

Visualization of Interactive Circos Plot

Usage

```
Circos(
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  genome2 = "hg19",
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  height = NULL,
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  outerRadius = 240,
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SCATTERMouseDownCircleOpacity = 1,
SCATTERMouseDownCircleStrokeColor = "none",
SCATTERMouseDownCircleStrokeWidth = "none",
SCATTERMouseEnterDisplay = FALSE,
SCATTERMouseEnterColor = "red",
SCATTERMouseEnterCircleSize = 2,
SCATTERMouseEnterCircleOpacity = 1,
SCATTERMouseEnterCircleStrokeColor = "none",
SCATTERMouseEnterCircleStrokeWidth = "none",
```

```
SCATTERMouseLeaveDisplay = FALSE,
SCATTERMouseLeaveColor = "red",
SCATTERMouseLeaveCircleSize = 2,
SCATTERMouseLeaveCircleOpacity = 1,
SCATTERMouseLeaveCircleStrokeColor = "none",
SCATTERMouseLeaveCircleStrokeWidth = "none",
SCATTERMouseMoveDisplay = FALSE,
SCATTERMouseMoveColor = "red",
SCATTERMouseMoveCircleSize = 2,
SCATTERMouseMoveCircleOpacity = 1,
SCATTERMouseMoveCircleStrokeColor = "none",
SCATTERMouseMoveCircleStrokeWidth = "none",
SCATTERMouseOutDisplay = FALSE,
SCATTERMouseOutAnimationTime = 500,
SCATTERMouseOutColor = "red",
SCATTERMouseOutCircleSize = 2,
SCATTERMouseOutCircleOpacity = 1,
SCATTERMouseOutCircleStrokeColor = "none",
SCATTERMouseOutCircleStrokeWidth = "none",
SCATTERMouseUpDisplay = FALSE,
SCATTERMouseUpColor = "red",
SCATTERMouseUpCircleSize = 2,
SCATTERMouseUpCircleOpacity = 1,
SCATTERMouseUpCircleStrokeColor = "none",
SCATTERMouseUpCircleStrokeWidth = "none",
SCATTERMouseOverDisplay = FALSE,
SCATTERMouseOverColor = "red",
SCATTERMouseOverCircleSize = 2,
SCATTERMouseOverCircleOpacity = 1,
SCATTERMouseOverCircleStrokeColor = "none",
SCATTERMouseOverCircleStrokeWidth = "none",
SCATTERMouseOverTooltipsSetting = "style1",
SCATTERMouseOverTooltipsHtml = " ",
SCATTERMouseOverTooltipsPosition = "absolute",
SCATTERMouseOverTooltipsBackgroundColor = "white",
SCATTERMouseOverTooltipsBorderStyle = "solid",
SCATTERMouseOverTooltipsBorderWidth = 0,
SCATTERMouseOverTooltipsPadding = "3px",
SCATTERMouseOverTooltipsBorderRadius = "3px",
SCATTERMouseOverTooltipsOpacity = 1,
ARCxlink = FALSE,
ARCMouseEvent = TRUE,
ARCMouseClickDisplay = FALSE,
ARCMouseClickColor = "red",
ARCMouseClickArcOpacity = 1,
ARCMouseClickArcStrokeColor = "none",
ARCMouseClickArcStrokeWidth = "none",
ARCMouseClickTextFromData = "fourth",
ARCMouseClickTextOpacity = 1,
ARCMouseClickTextColor = "red",
ARCMouseClickTextSize = 8,
ARCMouseClickTextPostionX = 1,
```

```
ARCMouseClickTextPostionY = 10,
ARCMouseClickTextDrag = TRUE,
ARCMouseDownDisplay = FALSE,
ARCMouseDownColor = "red",
ARCMouseDownArcOpacity = 1,
ARCMouseDownArcStrokeColor = "none",
ARCMouseDownArcStrokeWidth = "none",
ARCMouseEnterDisplay = FALSE,
ARCMouseEnterColor = "red",
ARCMouseEnterArcOpacity = 1,
ARCMouseEnterArcStrokeColor = "none",
ARCMouseEnterArcStrokeWidth = "none",
ARCMouseLeaveDisplay = FALSE,
ARCMouseLeaveColor = "red",
ARCMouseLeaveArcOpacity = 1,
ARCMouseLeaveArcStrokeColor = "none",
ARCMouseLeaveArcStrokeWidth = "none",
ARCMouseMoveDisplay = FALSE,
ARCMouseMoveColor = "red",
ARCMouseMoveArcOpacity = 1,
ARCMouseMoveArcStrokeColor = "none",
ARCMouseMoveArcStrokeWidth = "none",
ARCMouseOutDisplay = FALSE,
ARCMouseOutAnimationTime = 500,
ARCMouseOutColor = "red",
ARCMouseOutArcOpacity = 1,
ARCMouseOutArcStrokeColor = "none",
ARCMouseOutArcStrokeWidth = "none",
ARCMouseUpDisplay = FALSE,
ARCMouseUpColor = "red",
ARCMouseUpArcOpacity = 1,
ARCMouseUpArcStrokeColor = "none",
ARCMouseUpArcStrokeWidth = "none",
ARCMouseOverDisplay = FALSE,
ARCMouseOverColor = "red",
ARCMouseOverArcOpacity = 1,
ARCMouseOverArcStrokeColor = "none",
ARCMouseOverArcStrokeWidth = "none",
ARCMouseOverTooltipsSetting = "style1",
ARCMouseOverTooltipsHtml = " ",
ARCMouseOverTooltipsPosition = "absolute",
ARCMouseOverTooltipsBackgroundColor = "white",
ARCMouseOverTooltipsBorderStyle = "solid",
ARCMouseOverTooltipsBorderWidth = 0,
ARCMouseOverTooltipsPadding = "3px",
ARCMouseOverTooltipsBorderRadius = "3px",
ARCMouseOverTooltipsOpacity = 1,
GENExlink = FALSE,
GENEMouseEvent = TRUE,
GENEMouseClickDisplay = FALSE,
GENEMouseClickColor = "red",
GENEMouseClickArcOpacity = 1,
```

```
GENEMouseClickArcStrokeColor = "none",
GENEMouseClickArcStrokeWidth = "none",
GENEMouseClickTextFromData = "fourth",
GENEMouseClickTextOpacity = 1,
GENEMouseClickTextColor = "red",
GENEMouseClickTextSize = 8,
GENEMouseClickTextPostionX = 1,
GENEMouseClickTextPostionY = 10,
GENEMouseClickTextDrag = TRUE,
GENEMouseDownDisplay = FALSE,
GENEMouseDownColor = "red",
GENEMouseDownArcOpacity = 1,
GENEMouseDownArcStrokeColor = "none",
GENEMouseDownArcStrokeWidth = "none",
GENEMouseEnterDisplay = FALSE,
GENEMouseEnterColor = "red",
GENEMouseEnterArcOpacity = 1,
GENEMouseEnterArcStrokeColor = "none",
GENEMouseEnterArcStrokeWidth = "none",
GENEMouseLeaveDisplay = FALSE,
GENEMouseLeaveColor = "red",
GENEMouseLeaveArcOpacity = 1,
GENEMouseLeaveArcStrokeColor = "none",
GENEMouseLeaveArcStrokeWidth = "none",
GENEMouseMoveDisplay = FALSE,
GENEMouseMoveColor = "red",
GENEMouseMoveArcOpacity = 1,
GENEMouseMoveArcStrokeColor = "none",
GENEMouseMoveArcStrokeWidth = "none",
GENEMouseOutDisplay = FALSE,
GENEMouseOutAnimationTime = 500,
GENEMouseOutColor = "red",
GENEMouseOutArcOpacity = 1,
GENEMouseOutArcStrokeColor = "none",
GENEMouseOutArcStrokeWidth = "none",
GENEMouseUpDisplay = FALSE,
GENEMouseUpColor = "red",
GENEMouseUpArcOpacity = 1,
GENEMouseUpArcStrokeColor = "none",
GENEMouseUpArcStrokeWidth = "none",
GENEMouseOverDisplay = FALSE,
GENEMouseOverColor = "red",
GENEMouseOverArcOpacity = 1,
GENEMouseOverArcStrokeColor = "none",
GENEMouseOverArcStrokeWidth = "none",
GENEMouseOverTooltipsSetting = "style1",
GENEMouseOverTooltipsHtml = " ",
GENEMouseOverTooltipsPosition = "absolute",
GENEMouseOverTooltipsBackgroundColor = "white",
GENEMouseOverTooltipsBorderStyle = "solid",
GENEMouseOverTooltipsBorderWidth = 0,
GENEMouseOverTooltipsPadding = "3px",
```

```
GENEMouseOverTooltipsBorderRadius = "3px",
GENEMouseOverTooltipsOpacity = 1,
LOLLIPOPxlink = FALSE,
LOLLIPOPMouseEvent = TRUE,
LOLLIPOPMouseClickDisplay = FALSE,
LOLLIPOPMouseClickColor = "red",
LOLLIPOPMouseClickCircleSize = 2,
LOLLIPOPMouseClickCircleOpacity = 1,
LOLLIPOPMouseClickCircleStrokeColor = "none",
LOLLIPOPMouseClickCircleStrokeWidth = "none",
LOLLIPOPMouseClickTextFromData = "fourth",
LOLLIPOPMouseClickTextOpacity = 1,
LOLLIPOPMouseClickTextColor = "red",
LOLLIPOPMouseClickTextSize = 8,
LOLLIPOPMouseClickTextPostionX = 1,
LOLLIPOPMouseClickTextPostionY = 10,
LOLLIPOPMouseClickTextDrag = TRUE,
LOLLIPOPMouseDownDisplay = FALSE,
LOLLIPOPMouseDownColor = "red",
LOLLIPOPMouseDownCircleSize = 2,
LOLLIPOPMouseDownCircleOpacity = 1,
LOLLIPOPMouseDownCircleStrokeColor = "none",
LOLLIPOPMouseDownCircleStrokeWidth = "none",
LOLLIPOPMouseEnterDisplay = FALSE,
LOLLIPOPMouseEnterColor = "red",
LOLLIPOPMouseEnterCircleSize = 2,
LOLLIPOPMouseEnterCircleOpacity = 1,
LOLLIPOPMouseEnterCircleStrokeColor = "none",
LOLLIPOPMouseEnterCircleStrokeWidth = "none",
LOLLIPOPMouseLeaveDisplay = FALSE,
LOLLIPOPMouseLeaveColor = "red",
LOLLIPOPMouseLeaveCircleSize = 2,
LOLLIPOPMouseLeaveCircleOpacity = 1,
LOLLIPOPMouseLeaveCircleStrokeColor = "none",
LOLLIPOPMouseLeaveCircleStrokeWidth = "none",
LOLLIPOPMouseMoveDisplay = FALSE,
LOLLIPOPMouseMoveColor = "red",
LOLLIPOPMouseMoveCircleSize = 2,
LOLLIPOPMouseMoveCircleOpacity = 1,
LOLLIPOPMouseMoveCircleStrokeColor = "none",
LOLLIPOPMouseMoveCircleStrokeWidth = "none",
LOLLIPOPMouseOutDisplay = FALSE,
LOLLIPOPMouseOutAnimationTime = 500,
LOLLIPOPMouseOutColor = "red",
LOLLIPOPMouseOutCircleSize = 2,
LOLLIPOPMouseOutCircleOpacity = 1,
LOLLIPOPMouseOutCircleStrokeColor = "none",
LOLLIPOPMouseOutCircleStrokeWidth = "none",
LOLLIPOPMouseUpDisplay = FALSE,
LOLLIPOPMouseUpColor = "red",
LOLLIPOPMouseUpCircleSize = 2,
LOLLIPOPMouseUpCircleOpacity = 1,
```

```
    LOLLIPOPMouseUpCircleStrokeColor = "none",
    LOLLIPOPMouseUpCircleStrokeWidth = "none",
    LOLLIPOPMouseOverDisplay = FALSE,
    LOLLIPOPMouseOverColor = "red",
    LOLLIPOPMouseOverCircleSize = 2,
    LOLLIPOPMouseOverCircleOpacity = 1,
    LOLLIPOPMouseOverCircleStrokeColor = "none",
    LOLLIPOPMouseOverCircleStrokeWidth = "none",
    LOLLIPOPMouseOverTooltipsSetting = "style1",
    LOLLIPOPMouseOverTooltipsHtml = " ",
    LOLLIPOPMouseOverTooltipsPosition = "absolute",
    LOLLIPOPMouseOverTooltipsBackgroundColor = "white",
    LOLLIPOPMouseOverTooltipsBorderStyle = "solid",
    LOLLIPOPMouseOverTooltipsBorderWidth = 0,
    LOLLIPOPMouseOverTooltipsPadding = "3px",
    LOLLIPOPMouseOverTooltipsBorderRadius = "3px",
    LOLLIPOPMouseOverTooltipsOpacity = 1,
    elementId = NULL,
    ...
)
```

Arguments

`moduleList`	Module list displayed in plot
`genome`	Could be either 'hg19', which is defaultly set to use chromosomes of hg19, or a list of chromosomes with length, for example, list("chr1"=100,"chr2"=200)
`genome2`	Second genome when compare module is applied, format is same as genome
`genomeFillColor`	
	Could be either a color palette from RColorBrewer, or a list of color name, for example, list("yellow","rgb(1,255,255)")
`chrPad`	Distance between each chromosome, default is 0.04
`width, height`	The width and height for svg element, could be px or percent or auto
`innerRadius`	Default 216, Inner radius of chromosome
`outerRadius`	Default 240, Outer radius of chromosome
`svgClassName`	The svg class name
`displayGenomeBorder`	
	Whether display a border for genome track or not
`genomeBorderColor, genomeBorderSize`	
	The color and size for border of genome
`genomeTicksDisplay`	
	Whether display the ticks for genome track
`genomeTicksLen, genomeTicksColor, genomeTicksTextSize, genomeTicksTextColor, genomeTicksScale, genomeTicksRealLength, genomeTicksOffset`	
	arameters only works when genomeTicksDisplay is TRUE and their details are available on document
`genomeLabelDisplay, genomeLabelTextSize, genomeLabelTextColor, genomeLabelDx, genomeLabelDy`	
	Whether display the label for chromosome panel. Other parameters only works when genomeTicksDisplay is TRUE and their details are available on document

compareEvent   Default False, open/not COMPARE module

compareEventGroupGapRate

                Default 0.1, control the two-side gap rate on each group of genome

compareEventGroupDistance

                Default 0, distance between two groups of genome

zoom   Whether or not the plot is zoomable?

TEXTModuleDragEvent

                Are text annotations draggable?

CNVxlink   Default False, add/not xlink for CNV module

CNVMouseEvent   Default True, open/not open mouse event of CNV module

CNVMouseClickDisplay

                Default False, show/not the tooltip when mouse click on a CNV point

CNVMouseClickColor

                Color when mouse clicking

CNVMouseClickArcOpacity

                Arc opacity when mouse clicking the element

CNVMouseClickArcStrokeColor

                Arc stroke color when mouse clicking the element

CNVMouseClickArcStrokeWidth

                Arc stroke width when mouse clicking the element

CNVMouseClickTextFromData

                Text column when mouse clicking the element

CNVMouseClickTextOpacity

                Text opacity when mouse clicking the element

CNVMouseClickTextColor

                Text color when mouse clicking the element

CNVMouseClickTextSize

                Text size when mouse clicking the element

CNVMouseClickTextPostionX, CNVMouseClickTextPostionY

                Text coordinates when mouse clicking the element

CNVMouseClickTextDrag

                Whether text is draggable when mouse clicking the element

CNVMouseDownDisplay

                Default False, show/not the tooltip when mouse click down a CNV point

CNVMouseDownColor

                Color when mouse moving down the element

CNVMouseDownArcOpacity

                Arc opacity when mouse moving down the element

CNVMouseDownArcStrokeColor

                Arc stroke color when mouse moving down the element

CNVMouseDownArcStrokeWidth

                Arc stroke width when mouse moving down the element

CNVMouseEnterDisplay

                Default False, show/not the tooltip when mouse mover over a CNV point

CNVMouseEnterColor

                Color when mouse entering the element

CNVMouseEnterArcOpacity

                Arc opacity when mouse entering the element

CNVMouseEnterArcStrokeColor

        Arc stroke color when mouse entering the element

CNVMouseEnterArcStrokeWidth

        Arc stroke width when mouse entering the element

CNVMouseLeaveDisplay

        Default False, show/not the tooltip when mouse mover leave a CNV point

CNVMouseLeaveColor

        Color when mouse leaving the element

CNVMouseLeaveArcOpacity

        Arc opacity when mouse leaving the element

CNVMouseLeaveArcStrokeColor

        Arc stroke color when mouse leaving the element

CNVMouseLeaveArcStrokeWidth

        Arc stroke width when mouse leaving the element

CNVMouseMoveDisplay

        Default False, show/not the tooltip when mouse move into a CNV point

CNVMouseMoveColor

        Color when mouse moving in the element

CNVMouseMoveArcOpacity

        Arc opacity when mouse moving in the element

CNVMouseMoveArcStrokeColor

        Arc stroke color when mouse moving in the element

CNVMouseMoveArcStrokeWidth

        Arc stroke width when mouse moving in the element

CNVMouseOutDisplay

        Defalut False, hide/not tooltip when mouse is not hovering a CNV point anymore

CNVMouseOutAnimationTime

        Animation time when mouse moving out the element

CNVMouseOutColor

        Color when mouse moving out the element

CNVMouseOutArcOpacity

        Arc opacity when mouse moving out the element

CNVMouseOutArcStrokeColor

        Arc stroke color when mouse moving out the element

CNVMouseOutArcStrokeWidth

        Arc stroke width when mouse moving out the element

CNVMouseUpDisplay

        Default False, show/not the tooltip when mouse click up a CNV point

CNVMouseUpColor

        Color when mouse moving up the element

CNVMouseUpArcOpacity

        Arc opacity when mouse clicking the element

CNVMouseUpArcStrokeColor

        Arc stroke color when mouse clicking the element

CNVMouseUpArcStrokeWidth

        Arc stroke width when mouse clicking the element

CNVMouseOverDisplay

        Default False, show/not the tooltip when mouse hover on a CNV point

CNVMouseOverColor

Color when mouse moving over the element

CNVMouseOverArcOpacity

Arc opacity when mouse moving over the element

CNVMouseOverArcStrokeColor

Arc stroke color when mouse moving over the element

CNVMouseOverArcStrokeWidth

Arc stroke width when mouse moving over the element

CNVMouseOverTooltipsSetting

Default "style1"

CNVMouseOverTooltipsHtml

Default " "

CNVMouseOverTooltipsPosition

Default "absolute"

CNVMouseOverTooltipsBackgroundColor

Default "white"

CNVMouseOverTooltipsBorderStyle

Default "solid"

CNVMouseOverTooltipsBorderWidth

Default 0

CNVMouseOverTooltipsPadding

Default "3px"

CNVMouseOverTooltipsBorderRadius

Default "3px"

CNVMouseOverTooltipsOpacity

Default 0.8

HEATMAPMouseEvent

Default True, open/not open mouse event of HEATMAP module

HEATMAPMouseClickDisplay

Default False, show/not the tooltip when mouse click on a HEATMAP point

HEATMAPMouseClickColor

Color when mouse clicking

HEATMAPMouseClickOpacity

Opacity when mouse clicking

HEATMAPMouseClickStrokeColor

Stroke color when mouse clicking

HEATMAPMouseClickStrokeWidth

Stroke width when mouse clicking

HEATMAPMouseDownDisplay

Default False, show/not the tooltip when mouse click down a HEATMAP point

HEATMAPMouseDownColor

Color when mouse moving down the element

HEATMAPMouseDownOpacity

Opacity when mouse moving down the element

HEATMAPMouseDownStrokeColor

Stroke color when mouse moving down the element

HEATMAPMouseDownStrokeWidth

Stroke width when mouse moving down the element

HEATMAPMouseEnterDisplay
                    Default False, show/not the tooltip when mouse mover over a HEATMAP point
HEATMAPMouseEnterColor
                    Color when mouse entering the element
HEATMAPMouseEnterOpacity
                    Opacity when mouse entering the element
HEATMAPMouseEnterStrokeColor
                    Stroke color when mouse entering the element
HEATMAPMouseEnterStrokeWidth
                    Stroke width when mouse entering the element
HEATMAPMouseLeaveDisplay
                    Default False, show/not the tooltip when mouse mover leave a HEATMAP point
HEATMAPMouseLeaveColor
                    Color when mouse leaving the element
HEATMAPMouseLeaveOpacity
                    Opacity when mouse leaving the element
HEATMAPMouseLeaveStrokeColor
                    Stroke color when mouse leaving the element
HEATMAPMouseLeaveStrokeWidth
                    Stroke width when mouse leaving the element
HEATMAPMouseMoveDisplay
                    Default False, show/not the tooltip when mouse move into a HEATMAP point
HEATMAPMouseMoveColor
                    Color when mouse moving in the element
HEATMAPMouseMoveOpacity
                    Opacity when mouse moving in the element
HEATMAPMouseMoveStrokeColor
                    Stroke color when mouse moving in the element
HEATMAPMouseMoveStrokeWidth
                    Stroke width when mouse moving in the element
HEATMAPMouseOutDisplay
                    Defalut False, hide/not tooltip when mouse is not hovering a HEATMAP point
                    anymore
HEATMAPMouseOutAnimationTime
                    Animation time when mouse moving out the element
HEATMAPMouseOutColor
                    Color when mouse moving out the element
HEATMAPMouseOutOpacity
                    Opacity when mouse moving out the element
HEATMAPMouseOutStrokeColor
                    Stroke color when mouse moving out the element
HEATMAPMouseOutStrokeWidth
                    Stroke width when mouse moving out the element
HEATMAPMouseUpDisplay
                    Default False, show/not the tooltip when mouse click up a HEATMAP point
HEATMAPMouseUpColor
                    Color when mouse moving up the element

HEATMAPMouseUpOpacity
        Opacity when mouse moving up the element

HEATMAPMouseUpStrokeColor
        Stroke color when mouse moving up the element

HEATMAPMouseUpStrokeWidth
        Stroke width when mouse moving up the element

HEATMAPMouseOverDisplay
        Default False, show/not the tooltip when mouse hover on a HEATMAP point

HEATMAPMouseOverColor
        Color when mouse moving over the element

HEATMAPMouseOverOpacity
        Opacity when mouse moving over the element

HEATMAPMouseOverStrokeColor
        Stroke color when mouse moving over the element

HEATMAPMouseOverStrokeWidth
        Stroke width when mouse moving over the element

HEATMAPMouseOverTooltipsSetting
        Default "style1"

HEATMAPMouseOverTooltipsHtml
        Default " "

HEATMAPMouseOverTooltipsPosition
        Default "absolute"

HEATMAPMouseOverTooltipsBackgroundColor
        Default "white"

HEATMAPMouseOverTooltipsBorderStyle
        Default "solid"

HEATMAPMouseOverTooltipsBorderWidth
        Default 0

HEATMAPMouseOverTooltipsPadding
        Default "3px"

HEATMAPMouseOverTooltipsBorderRadius
        Default "3px"

HEATMAPMouseOverTooltipsOpacity
        Default 0.8

BUBBLExlink   Default False, add/not xlink for BUBBLE module

BUBBLEMouseEvent
        Default True, open/not open mouse event of BUBBLE module

BUBBLEMouseClickDisplay
        Default False, show/not the tooltip when mouse click on a BUBBLE point

BUBBLEMouseClickColor
        Color when mouse clicking

BUBBLEMouseClickOpacity
        Opacity when mouse clicking

BUBBLEMouseClickStrokeColor
        Stroke color when mouse clicking

BUBBLEMouseClickStrokeWidth
        Stroke width when mouse clicking

BUBBLEMouseDownDisplay
        Default False, show/not the tooltip when mouse click down a BUBBLE point

BUBBLEMouseDownColor
                    Color when mouse moving down the element
BUBBLEMouseDownOpacity
                    Opacity when mouse moving down the element
BUBBLEMouseDownStrokeColor
                    Stroke color when mouse moving down the element
BUBBLEMouseDownStrokeWidth
                    Stroke width when mouse moving down the element
BUBBLEMouseEnterDisplay
                    Default False, show/not the tooltip when mouse mover over a BUBBLE point
BUBBLEMouseEnterColor
                    Color when mouse entering the element
BUBBLEMouseEnterOpacity
                    Opacity when mouse entering the element
BUBBLEMouseEnterStrokeColor
                    Stroke color when mouse entering the element
BUBBLEMouseEnterStrokeWidth
                    Stroke width when mouse entering the element
BUBBLEMouseLeaveDisplay
                    Default False, show/not the tooltip when mouse mover leave a BUBBLE point
BUBBLEMouseLeaveColor
                    Color when mouse leaving the element
BUBBLEMouseLeaveOpacity
                    Opacity when mouse leaving the element
BUBBLEMouseLeaveStrokeColor
                    Stroke color when mouse leaving the element
BUBBLEMouseLeaveStrokeWidth
                    Stroke width when mouse leaving the element
BUBBLEMouseMoveDisplay
                    Default False, show/not the tooltip when mouse move into a BUBBLE point
BUBBLEMouseMoveColor
                    Color when mouse moving in the element
BUBBLEMouseMoveOpacity
                    Opacity when mouse moving in the element
BUBBLEMouseMoveStrokeColor
                    Stroke color when mouse moving in the element
BUBBLEMouseMoveStrokeWidth
                    Stroke width when mouse moving in the element
BUBBLEMouseOutDisplay
                    Defalut False, hide/not tooltip when mouse is not hovering a BUBBLE point
                    anymore
BUBBLEMouseOutAnimationTime
                    Animation time when mouse moving out the element
BUBBLEMouseOutColor
                    Color when mouse moving out the element
BUBBLEMouseOutOpacity
                    Opacity when mouse moving out the element

BUBBLEMouseOutStrokeColor

        Stroke color when mouse moving out the element

BUBBLEMouseOutStrokeWidth

        Stroke width when mouse moving out the element

BUBBLEMouseUpDisplay

        Default False, show/not the tooltip when mouse click up a BUBBLE point

BUBBLEMouseUpColor

        Color when mouse moving up the element

BUBBLEMouseUpOpacity

        Opacity when mouse moving up the element

BUBBLEMouseUpStrokeColor

        Stroke color when mouse moving up the element

BUBBLEMouseUpStrokeWidth

        Stroke width when mouse moving up the element

BUBBLEMouseOverDisplay

        Default False, show/not the tooltip when mouse hover on a BUBBLE point

BUBBLEMouseOverColor

        Color when mouse moving over the element

BUBBLEMouseOverOpacity

        Opacity when mouse moving over the element

BUBBLEMouseOverStrokeColor

        Stroke color when mouse moving over the element

BUBBLEMouseOverStrokeWidth

        Stroke width when mouse moving over the element

BUBBLEMouseOverTooltipsSetting

        Default "style1"

BUBBLEMouseOverTooltipsHtml

        Default " "

BUBBLEMouseOverTooltipsPosition

        Default "absolute"

BUBBLEMouseOverTooltipsBackgroundColor

        Default "white"

BUBBLEMouseOverTooltipsBorderStyle

        Default "solid"

BUBBLEMouseOverTooltipsBorderWidth

        Default 0

BUBBLEMouseOverTooltipsPadding

        Default "3px"

BUBBLEMouseOverTooltipsBorderRadius

        Default "3px"

BUBBLEMouseOverTooltipsOpacity

        Default 0.8

SNPxlink   Default False, add/not xlink for SNP module

SNPMouseEvent   Default True, open/not open mouse event of SNP module

SNPMouseCombinationEvent

        Default False, open/not COMBINATION module for SNP module

SNPMouseCombinationImageDisplay

        Defalut False, open/not image display in COMBINATION module for SNP module

```
SNPMouseCombinationImageTitle
```
Title of the image
```
SNPMouseCombinationImageTitleSize, SNPMouseCombinationImageTitleWeight,
SNPMouseCombinationImageTitleColor
```
Size, weight and color of the title
```
SNPMouseCombinationImagePositionX, SNPMouseCombinationImagePositionY
```
Coordinates for image
```
SNPMouseCombinationImageHeight, SNPMouseCombinationImageWidth
```
Height and width of image
```
SNPMouseCombinationGraphDisplay
```
Defalut False, open/not graph display in COMBINATION module for SNP module
```
SNPMouseCombinationGraphTitle
```
Title of the graph
```
SNPMouseCombinationGraphTitleSize, SNPMouseCombinationGraphTitleWeight,
SNPMouseCombinationGraphTitleColor
```
Size, weight and color of the title
```
SNPMouseCombinationGraphType
```
Type of graph
```
SNPMouseCombinationGraphPositionX, SNPMouseCombinationGraphPositionY
```
Coordinates for graph
```
SNPMouseCombinationGraphHeight, SNPMouseCombinationGraphWidth
```
Height and width for graph
```
SNPMouseCombinationGraphHistogramBarColor
```
Bar color of histogram graph
```
SNPMouseCombinationGraphHistogramPadding
```
Padding between bar of histogram graph
```
SNPMouseCombinationGraphHistogramPositionCorrectX
```
Correction distance of X axis in histogram
```
SNPMouseCombinationGraphPieAutoColor
```
Whether use auto color for pie graph or not
```
SNPMouseCombinationGraphPieColor
```
Color for pie graph if auto color is false
```
SNPMouseCombinationGraphPieSize
```
Size of pie graph
```
SNPMouseCombinationGraphPieStroke
```
Whether each pie has a stroke or not
```
SNPMouseCombinationGraphPieStrokeColor, SNPMouseCombinationGraphPieStrokeWidth
```
The stroke color and width for pie graph
```
SNPMouseCombinationGraphPieOpacity
```
Opacity for pie graph
```
SNPMouseCombinationGraphLineType, SNPMouseCombinationGraphLineColor,
SNPMouseCombinationGraphLineWidth
```
Line type, color and width for line graph
```
SNPMouseCombinationGraphLinePoint
```
Whether display the broken point in line graph
```
SNPMouseCombinationGraphLinePointSize
```
Size of broken point

SNPMouseCombinationGraphLinePointAutoColor

           Whether display the broken point in auto color

SNPMouseCombinationGraphLinePointColor

           Color for broken point if auto color is false

SNPMouseCombinationGraphLinePointStroke

           Whether display the broken point stroke

SNPMouseCombinationGraphLinePointStrokeColor,
SNPMouseCombinationGraphLinePointStrokeWidth

           The stroke color and width for broken point

SNPMouseCombinationGraphLinePointOpacity

           Opacity for broken line

SNPMouseCombinationGraphLinePositionCorrectX

           Correction distance of X axis for line

SNPMouseCombinationTextDisplay

           Defalut False, open/not text display in COMBINATION module for SNP module

SNPMouseCombinationTextColor,   SNPMouseCombinationTextSize,
SNPMouseCombinationTextWeight

           The color, size and weight for text

SNPMouseCombinationTextPositionCorrectX, SNPMouseCombinationTextPositionCorrectY

           The coordinates for text

SNPMouseClickDisplay

           Default False, show/not the tooltip when mouse click on a SNP point

SNPMouseClickColor

           Color after clicking the element

SNPMouseClickCircleSize

           Circle size after clicking the element

SNPMouseClickCircleOpacity

           Opacity after clicking the element

SNPMouseClickCircleStrokeColor

           Stroke color after clicking the element

SNPMouseClickCircleStrokeWidth

           Stroke width after clicking the element

SNPMouseClickTextFromData

           First,second,third,fourth column data click to show

SNPMouseClickTextOpacity

           Text opacity after clicking the element

SNPMouseClickTextColor

           Text color after clicking the element

SNPMouseClickTextSize

           Text size after clicking the element

SNPMouseClickTextPostionX, SNPMouseClickTextPostionY

           Text coordinate after clicking the element

SNPMouseClickTextDrag

           Whether text is draggable for element

SNPMouseDownDisplay

           Default False, show/not the tooltip when mouse click down a SNP point

SNPMouseDownColor

           Color after mouse moving down the element

SNPMouseDownCircleSize
                    Circle size after mouse moving down the element
SNPMouseDownCircleOpacity
                    Circle opacity after mouse moving down the element
SNPMouseDownCircleStrokeColor
                    Circle stroke color after mouse moving down the element
SNPMouseDownCircleStrokeWidth
                    Circle stroke width after mouse moving down the element
SNPMouseEnterDisplay
                    Default False, show/not the tooltip when mouse mover over a SNP point
SNPMouseEnterColor
                    Color after mouse entering enter the element
SNPMouseEnterCircleSize
                    Circle size after mouse entering the element
SNPMouseEnterCircleOpacity
                    Circle opacity after mouse entering the element
SNPMouseEnterCircleStrokeColor
                    Circle stroke color after mouse entering the element
SNPMouseEnterCircleStrokeWidth
                    Circle stroke width after mouse entering the element
SNPMouseLeaveDisplay
                    Default False, show/not the tooltip when mouse mover leave a SNP point
SNPMouseLeaveColor
                    Color after mouse leaving the element
SNPMouseLeaveCircleSize
                    Circle size after mouse leaving the element
SNPMouseLeaveCircleOpacity
                    Circle opacity after mouse leaving the element
SNPMouseLeaveCircleStrokeColor
                    Circle stroke color after mouse leaving the element
SNPMouseLeaveCircleStrokeWidth
                    Circle stroke width after mouse leaving the element
SNPMouseMoveDisplay
                    Default False, show/not the tooltip when mouse move into a SNP point
SNPMouseMoveColor
                    Color after mouse moving in the element
SNPMouseMoveCircleSize
                    Circle size after mouse moving in the element
SNPMouseMoveCircleOpacity
                    Circle opacity after mouse moving in the element
SNPMouseMoveCircleStrokeColor
                    Circle stroke color after mouse moving in the element
SNPMouseMoveCircleStrokeWidth
                    Circle stroke width after mouse moving in the element
SNPMouseOutDisplay
                    Defalut False, hide/not tooltip when mouse is not hovering a SNP point anymore
SNPMouseOutAnimationTime
                    Animation time when mouse moving over the element

SNPMouseOutColor

    Color when mouse moving over the element

SNPMouseOutCircleSize

    Circle size when mouse moving over the element

SNPMouseOutCircleOpacity

    Opacity when mouse moving over the element

SNPMouseOutCircleStrokeColor

    Stroke color when mouse moving over the element

SNPMouseOutCircleStrokeWidth

    Stroke width when mouse moving over the element

SNPMouseUpDisplay

    Default False, show/not the tooltip when mouse click up a SNP point

SNPMouseUpColor

    Color after mouse moving up the element

SNPMouseUpCircleSize

    Circle size after mouse moving up the element

SNPMouseUpCircleOpacity

    Circle opacity after mouse moving up the element

SNPMouseUpCircleStrokeColor

    Circle stroke color after mouse moving up the element

SNPMouseUpCircleStrokeWidth

    Circle stroke width after mouse moving up the element

SNPMouseOverDisplay

    Default False, show/not the tooltip when mouse hover on a SNP point

SNPMouseOverColor

    Color after mouse moving over the element

SNPMouseOverCircleSize

    Circle size after mouse moving over the element

SNPMouseOverCircleOpacity

    Circle opacity after mouse moving over the element

SNPMouseOverCircleStrokeColor

    Circle stroke color after mouse moving over the element

SNPMouseOverCircleStrokeWidth

    Circle stroke width after mouse moving over the element

SNPMouseOverTooltipsSetting

    Default "chr : "

SNPMouseOverTooltipsHtml

    Default " "

SNPMouseOverTooltipsPosition

    Position for tooltips when mouse moving over

SNPMouseOverTooltipsBackgroundColor

    Background color for tooltips when mouse moving over

SNPMouseOverTooltipsBorderStyle

    Border style for tooltips when mouse moving over

SNPMouseOverTooltipsBorderWidth

    Border width for tooltips when mouse moving over

SNPMouseOverTooltipsPadding

    Padding for tooltips when mouse moving over

SNPMouseOverTooltipsBorderRadius
                    Border radius for tooltips when mouse moving over
SNPMouseOverTooltipsOpacity
                    Opacity for tooltips when mouse moving over
LINKxlink   Default False, add/not xlink for LINK module
LINKMouseEvent   Default True, open/not open mouse event of LINK module
LINKMouseClickDisplay
                    Default False, show/not the tooltip when mouse click on a LINK point
LINKMouseClickOpacity
                    Opacity when mouse clicking
LINKMouseClickStrokeColor
                    Stroke color when mouse clicking
LINKMouseClickStrokeWidth
                    Stroke width when mouse clicking
LINKMouseDownDisplay
                    Default False, show/not the tooltip when mouse click down a LINK point
LINKMouseDownOpacity
                    Opacity when mouse moving down the element
LINKMouseDownStrokeColor
                    Stroke color when mouse moving down the element
LINKMouseDownStrokeWidth
                    Stroke width when mouse moving down the element
LINKMouseEnterDisplay
                    Default False, show/not the tooltip when mouse mover over a LINK point
LINKMouseEnterOpacity
                    Opacity when mouse entering the element
LINKMouseEnterStrokeColor
                    Stroke color when mouse entering the element
LINKMouseEnterStrokeWidth
                    Stroke width when mouse entering the element
LINKMouseLeaveDisplay
                    Default False, show/not the tooltip when mouse mover leave a LINK point
LINKMouseLeaveOpacity
                    Opacity when mouse leaving the element
LINKMouseLeaveStrokeColor
                    Stroke color when mouse leaving the element
LINKMouseLeaveStrokeWidth
                    Stroke width when mouse leaving the element
LINKMouseMoveDisplay
                    Default False, show/not the tooltip when mouse move into a LINK point
LINKMouseMoveOpacity
                    Opacity when mouse moving in the element
LINKMouseMoveStrokeColor
                    Stroke color when mouse moving in the element
LINKMouseMoveStrokeWidth
                    Stroke width when mouse moving in the element
LINKMouseOutDisplay
                    Defalut False, hide/not tooltip when mouse is not hovering a LINK point any-
                    more

LINKMouseOutAnimationTime
> Animation time when mouse moving out the element

LINKMouseOutOpacity
> Opacity when mouse moving out the element

LINKMouseOutStrokeColor
> Stroke color when mouse moving out the element

LINKMouseOutStrokeWidth
> Stroke width when mouse moving out the element

LINKMouseUpDisplay
> Default False, show/not the tooltip when mouse click up a LINK point

LINKMouseUpOpacity
> Opacity when mouse moving up the element

LINKMouseUpStrokeColor
> Stroke color when mouse moving up the element

LINKMouseUpStrokeWidth
> Stroke width when mouse moving up the element

LINKMouseOverDisplay
> Default False, show/not the tooltip when mouse hover on a LINK point

LINKMouseOverOpacity
> Opacity when mouse moving over the element

LINKMouseOverStrokeColor
> Stroke color when mouse moving over the element

LINKMouseOverStrokeWidth
> Stroke width when mouse moving over the element

LINKMouseOverTooltipsSetting
> Default "style1"

LINKMouseOverTooltipsHtml
> Default " "

LINKMouseOverTooltipsPosition
> Default "absolute"

LINKMouseOverTooltipsBackgroundColor
> Default "white"

LINKMouseOverTooltipsBorderStyle
> Default "solid"

LINKMouseOverTooltipsBorderWidth
> Default 0

LINKMouseOverTooltipsPadding
> Default "3px"

LINKMouseOverTooltipsBorderRadius
> Default "3px"

LINKMouseOverTooltipsOpacity
> Default 0.8

LINKLabelDragEvent
> Defalut False, draggable for the label of LINK module

CHORDMouseEvent
> Default True, open/not open mouse event of CHORD module from NG-Circos

CHORDMouseFillColorExcluded
> A type of color in character, chord in this color will be hided

`CHORDMouseClickDisplay`

> Default False, show/not the tooltip when mouse click on a CHORD point

`CHORDMouseClickOpacity`

> Opacity when mouse clicking

`CHORDMouseClickStrokeColor`

> Stroke color when mouse clicking

`CHORDMouseClickStrokeWidth`

> Stroke width when mouse clicking

`CHORDMouseDownDisplay`

> Default False, show/not the tooltip when mouse click down a CHORD point

`CHORDMouseDownOpacity`

> Opacity when mouse moving down the element

`CHORDMouseDownStrokeColor`

> Stroke color when mouse moving down the element

`CHORDMouseDownStrokeWidth`

> Stroke width when mouse moving down the element

`CHORDMouseEnterDisplay`

> Default False, show/not the tooltip when mouse mover over a CHORD point

`CHORDMouseEnterOpacity`

> Opacity when mouse entering the element

`CHORDMouseEnterStrokeColor`

> Stroke color when mouse entering the element

`CHORDMouseEnterStrokeWidth`

> Stroke width when mouse entering the element

`CHORDMouseLeaveDisplay`

> Default False, show/not the tooltip when mouse mover leave a CHORD point

`CHORDMouseLeaveOpacity`

> Opacity when mouse leaving the element

`CHORDMouseLeaveStrokeColor`

> Stroke color when mouse leaving the element

`CHORDMouseLeaveStrokeWidth`

> Stroke width when mouse leaving the element

`CHORDMouseMoveDisplay`

> Default False, show/not the tooltip when mouse move into a CHORD point

`CHORDMouseMoveOpacity`

> Opacity when mouse moving in the element

`CHORDMouseMoveStrokeColor`

> Stroke color when mouse moving in the element

`CHORDMouseMoveStrokeWidth`

> Stroke width when mouse moving in the element

`CHORDMouseOutDisplay`

> Defalut False, hide/not tooltip when mouse is not hovering a CHORD point anymore

`CHORDMouseOutAnimationTime`

> Animation time when mouse moving out the element

`CHORDMouseOutOpacity`

> Opacity when mouse moving out the element

```
CHORDMouseOutStrokeColor
```
                Stroke color when mouse moving out the element
```
CHORDMouseOutStrokeWidth
```
                Stroke width when mouse moving out the element
```
CHORDMouseUpDisplay
```
                Default False, show/not the tooltip when mouse click up a CHORD point
```
CHORDMouseUpOpacity
```
                Opacity when mouse moving up the element
```
CHORDMouseUpStrokeColor
```
                Stroke color when mouse moving up the element
```
CHORDMouseUpStrokeWidth
```
                Stroke width when mouse moving up the element
```
CHORDMouseOverDisplay
```
                Default False, show/not the tooltip when mouse hover on a CHORD point
```
CHORDMouseOverOpacity
```
                Opacity when mouse moving over the element
```
CHORDMouseOverStrokeColor
```
                Stroke color when mouse moving over the element
```
CHORDMouseOverStrokeWidth
```
                Stroke width when mouse moving over the element

```
HISTOGRAMxlink
```
Default False, add/not xlink for HISTOGRAM module
```
HISTOGRAMMouseEvent
```
                Default True, open/not open mouse event of HISTOGRAM module
```
HISTOGRAMMouseClickDisplay
```
                Default False, show/not the tooltip when mouse click on a HISTOGRAM point
```
HISTOGRAMMouseClickColor
```
                Color when mouse clicking
```
HISTOGRAMMouseClickOpacity
```
                Opacity when mouse clicking
```
HISTOGRAMMouseClickStrokeColor
```
                Stroke color when mouse clicking
```
HISTOGRAMMouseClickStrokeWidth
```
                Stroke width when mouse clicking
```
HISTOGRAMMouseDownDisplay
```
                Default False, show/not the tooltip when mouse click down a HISTOGRAM point
```
HISTOGRAMMouseDownColor
```
                Color when mouse moving down the element
```
HISTOGRAMMouseDownOpacity
```
                Opacity when mouse moving up the element
```
HISTOGRAMMouseDownStrokeColor
```
                Stroke color when mouse moving up the element
```
HISTOGRAMMouseDownStrokeWidth
```
                Stroke width when mouse moving up the element
```
HISTOGRAMMouseEnterDisplay
```
                Default False, show/not the tooltip when mouse mover over a HISTOGRAM point

`HISTOGRAMMouseEnterColor`
> Color when mouse entering the element

`HISTOGRAMMouseEnterOpacity`
> Opacity when mouse entering the element

`HISTOGRAMMouseEnterStrokeColor`
> Stroke color when mouse entering the element

`HISTOGRAMMouseEnterStrokeWidth`
> Stroke width when mouse entering the element

`HISTOGRAMMouseLeaveDisplay`
> Default False, show/not the tooltip when mouse mover leave a HISTOGRAM point

`HISTOGRAMMouseLeaveColor`
> Color when mouse leaving the element

`HISTOGRAMMouseLeaveOpacity`
> Opacity when mouse leaving the element

`HISTOGRAMMouseLeaveStrokeColor`
> Stroke color when mouse leaving the element

`HISTOGRAMMouseLeaveStrokeWidth`
> Stroke width when mouse leaving the element

`HISTOGRAMMouseMoveDisplay`
> Default False, show/not the tooltip when mouse move into a HISTOGRAM point

`HISTOGRAMMouseMoveColor`
> Color when mouse moving in the element

`HISTOGRAMMouseMoveOpacity`
> Opacity when mouse moving in the element

`HISTOGRAMMouseMoveStrokeColor`
> Stroke color when mouse moving in the element

`HISTOGRAMMouseMoveStrokeWidth`
> Stroke width when mouse moving in the element

`HISTOGRAMMouseOutDisplay`
> Defalut False, hide/not tooltip when mouse is not hovering a HISTOGRAM point anymore

`HISTOGRAMMouseOutAnimationTime`
> Animation time when mouse moving out the element

`HISTOGRAMMouseOutColor`
> Color when mouse moving out the element

`HISTOGRAMMouseOutOpacity`
> Opacity when mouse moving out the element

`HISTOGRAMMouseOutStrokeColor`
> Stroke color when mouse moving out the element

`HISTOGRAMMouseOutStrokeWidth`
> Stroke width when mouse moving out the element

`HISTOGRAMMouseUpDisplay`
> Default False, show/not the tooltip when mouse click up a HISTOGRAM point

`HISTOGRAMMouseUpColor`
> Color when mouse moving up the element

`HISTOGRAMMouseUpOpacity`
> Opacity when mouse moving up the element

HISTOGRAMMouseUpStrokeColor
>   Stroke color when mouse moving up the element

HISTOGRAMMouseUpStrokeWidth
>   Stroke width when mouse moving up the element

HISTOGRAMMouseOverDisplay
>   Default False, show/not the tooltip when mouse hover on a HISTOGRAM point

HISTOGRAMMouseOverColor
>   Color when mouse moving over the element

HISTOGRAMMouseOverOpacity
>   Opacity when mouse moving over the element

HISTOGRAMMouseOverStrokeColor
>   Stroke color when mouse moving over the element

HISTOGRAMMouseOverStrokeWidth
>   Stroke width when mouse moving over the element

HISTOGRAMMouseOverTooltipsSetting
>   Default "style1"

HISTOGRAMMouseOverTooltipsHtml
>   Default " "

HISTOGRAMMouseOverTooltipsPosition
>   Default "absolute"

HISTOGRAMMouseOverTooltipsBackgroundColor
>   Default "white"

HISTOGRAMMouseOverTooltipsBorderStyle
>   Default "solid"

HISTOGRAMMouseOverTooltipsBorderWidth
>   Default 0

HISTOGRAMMouseOverTooltipsPadding
>   Default "3px"

HISTOGRAMMouseOverTooltipsBorderRadius
>   Default "3px"

HISTOGRAMMouseOverTooltipsOpacity
>   Default 0.8

LINEMouseEvent   Default True, open/not open mouse event of LINE module

LINEMouseClickDisplay
>   Default False, show/not the tooltip when mouse click on a LINE point

LINEMouseClickLineOpacity
>   Line opacity when mouse clicking the element

LINEMouseClickLineStrokeColor
>   Stroke color when mouse clicking the element

LINEMouseClickLineStrokeWidth
>   Stroke width when mouse clicking the element

LINEMouseDownDisplay
>   Default False, show/not the tooltip when mouse click down a LINE point

LINEMouseDownLineOpacity
>   Line opacity when mouse moving down the element

LINEMouseDownLineStrokeColor
>   Stroke color when mouse moving down the element

LINEMouseDownLineStrokeWidth
>   Stroke width when mouse moving down the element

LINEMouseEnterDisplay
              Default False, show/not the tooltip when mouse mover over a LINE point
LINEMouseEnterLineOpacity
              Line opacity when mouse entering the element
LINEMouseEnterLineStrokeColor
              Stroke color when mouse entering the element
LINEMouseEnterLineStrokeWidth
              Stroke width when mouse entering the element
LINEMouseLeaveDisplay
              Default False, show/not the tooltip when mouse mover leave a LINE point
LINEMouseLeaveLineOpacity
              Line opacity when mouse leaving the element
LINEMouseLeaveLineStrokeColor
              Stroke color when mouse leaving the element
LINEMouseLeaveLineStrokeWidth
              Stroke width when mouse leaving the element
LINEMouseMoveDisplay
              Default False, show/not the tooltip when mouse move into a LINE point
LINEMouseMoveLineOpacity
              Line opacity when mouse moving in the element
LINEMouseMoveLineStrokeColor
              Stroke color when mouse moving in the element
LINEMouseMoveLineStrokeWidth
              Stroke width when mouse moving in the element
LINEMouseOutDisplay
              Defalut False, hide/not tooltip when mouse is not hovering a LINE point any-
              more
LINEMouseOutAnimationTime
              Animation time when mouse moving out the element
LINEMouseOutLineOpacity
              Line opacity when mouse moving out the element
LINEMouseOutLineStrokeColor
              Stroke color when mouse moving out the element
LINEMouseOutLineStrokeWidth
              Stroke width when mouse moving out the element
LINEMouseUpDisplay
              Default False, show/not the tooltip when mouse click up a LINE point
LINEMouseUpLineOpacity
              Line opacity when mouse moving up the element
LINEMouseUpLineStrokeColor
              Stroke color when mouse moving up the element
LINEMouseUpLineStrokeWidth
              Stroke width when mouse moving up the element
LINEMouseOverDisplay
              Default False, show/not the tooltip when mouse hover on a LINE point
LINEMouseOverLineOpacity
              Line opacity when mouse moving over the element
LINEMouseOverLineStrokeColor
              Stroke color when mouse moving over the element

```
LINEMouseOverLineStrokeWidth
```
> Stroke width when mouse moving over the element

```
LINEMouseOverTooltipsSetting
```
> Default "style1"

```
LINEMouseOverTooltipsHtml
```
> Default " "

```
LINEMouseOverTooltipsPosition
```
> Default "absolute"

```
LINEMouseOverTooltipsBackgroundColor
```
> Default "white"

```
LINEMouseOverTooltipsBorderStyle
```
> Default "solid"

```
LINEMouseOverTooltipsBorderWidth
```
> Default 0

```
LINEMouseOverTooltipsPadding
```
> Default "3px"

```
LINEMouseOverTooltipsBorderRadius
```
> Default "3px"

```
LINEMouseOverTooltipsOpacity
```
> Default 0.8

```
WIGMouseEvent
```
Default True, open/not open mouse event of WIG module

```
WIGMouseClickDisplay
```
> Default False, show/not the tooltip when mouse click on a WIG point

```
WIGMouseClickLineOpacity
```
> Line opacity when mouse clicking the element

```
WIGMouseClickLineStrokeColor
```
> Stroke color when mouse clicking the element

```
WIGMouseClickLineStrokeWidth
```
> Stroke width when mouse clicking the element

```
WIGMouseClickFillColor
```
> Filling color when mouse clicking the element

```
WIGMouseDownDisplay
```
> Default False, show/not the tooltip when mouse click down a WIG point

```
WIGMouseDownLineOpacity
```
> Line opacity when mouse moving down the element

```
WIGMouseDownLineStrokeColor
```
> Stroke color when mouse moving down the element

```
WIGMouseDownLineStrokeWidth
```
> Stroke width when mouse moving down the element

```
WIGMouseDownFillColor
```
> Filling color when mouse moving down the element

```
WIGMouseEnterDisplay
```
> Default False, show/not the tooltip when mouse mover over a WIG point

```
WIGMouseEnterLineOpacity
```
> Line opacity when mouse entering the element

```
WIGMouseEnterLineStrokeColor
```
> Stroke color when mouse entering the element

```
WIGMouseEnterLineStrokeWidth
```
> Stroke width when mouse entering the element

```
WIGMouseEnterFillColor
```
Filling color when mouse entering the element
```
WIGMouseLeaveDisplay
```
Default False, show/not the tooltip when mouse mover leave a WIG point
```
WIGMouseLeaveLineOpacity
```
Line opacity when mouse leaving the element
```
WIGMouseLeaveLineStrokeColor
```
Stroke color when mouse leaving the element
```
WIGMouseLeaveLineStrokeWidth
```
Stroke width when mouse leaving the element
```
WIGMouseLeaveFillColor
```
Filling color when mouse leaving the element
```
WIGMouseMoveDisplay
```
Default False, show/not the tooltip when mouse move into a WIG point
```
WIGMouseMoveLineOpacity
```
Line opacity when mouse moving in the element
```
WIGMouseMoveLineStrokeColor
```
Stroke color when mouse moving in the element
```
WIGMouseMoveLineStrokeWidth
```
Stroke width when mouse moving in the element
```
WIGMouseMoveFillColor
```
Filling color when mouse leaving the element
```
WIGMouseOutDisplay
```
Defalut False, hide/not tooltip when mouse is not hovering a WIG point anymore
```
WIGMouseOutAnimationTime
```
Animation time when mouse moving out the element
```
WIGMouseOutLineOpacity
```
Line opacity when mouse moving out the element
```
WIGMouseOutLineStrokeColor
```
Stroke color when mouse moving out the element
```
WIGMouseOutLineStrokeWidth
```
Stroke width when mouse moving out the element
```
WIGMouseOutFillColor
```
Filling color when mouse moving out the element
```
WIGMouseUpDisplay
```
Default False, show/not the tooltip when mouse click up a WIG point
```
WIGMouseUpLineOpacity
```
Line opacity when mouse moving up the element
```
WIGMouseUpLineStrokeColor
```
Stroke color when mouse moving up the element
```
WIGMouseUpLineStrokeWidth
```
Stroke width when mouse moving up the element
```
WIGMouseUpFillColor
```
Filling color when mouse moving up the element
```
WIGMouseOverDisplay
```
Default False, show/not the tooltip when mouse hover on a WIG point
```
WIGMouseOverLineOpacity
```
Line opacity when mouse moving over the element

WIGMouseOverLineStrokeColor
> Stroke color when mouse moving over the element

WIGMouseOverLineStrokeWidth
> Stroke width when mouse moving over the element

WIGMouseOverFillColor
> Filling color when mouse moving over the element

WIGMouseOverTooltipsSetting
> Default "style1"

WIGMouseOverTooltipsHtml
> Default " "

WIGMouseOverTooltipsPosition
> Default "absolute"

WIGMouseOverTooltipsBackgroundColor
> Default "white"

WIGMouseOverTooltipsBorderStyle
> Default "solid"

WIGMouseOverTooltipsBorderWidth
> Default 0

WIGMouseOverTooltipsPadding
> Default "3px"

WIGMouseOverTooltipsBorderRadius
> Default "3px"

WIGMouseOverTooltipsOpacity
> Default 0.8

SCATTERxlink   Default False, add/not xlink for SCATTER module

SCATTERMouseEvent
> Default True, open/not open mouse event of SCATTER module

SCATTERMouseClickDisplay
> Default False, show/not the tooltip when mouse click on a SCATTER point

SCATTERMouseClickColor
> Color when mouse clicking the element

SCATTERMouseClickCircleSize
> Circle size when mouse clicking the element

SCATTERMouseClickCircleOpacity
> Circle opacity when mouse clicking the element

SCATTERMouseClickCircleStrokeColor
> Circle stroke color when mouse clicking the element

SCATTERMouseClickCircleStrokeWidth
> Circle stroke width when mouse clicking the element

SCATTERMouseClickTextFromData
> Text column when mouse clicking the element

SCATTERMouseClickTextOpacity
> Text opacity when mouse clicking the element

SCATTERMouseClickTextColor
> Text color when mouse clicking the element

SCATTERMouseClickTextSize
> Text size when mouse clicking the element

SCATTERMouseClickTextPostionX, SCATTERMouseClickTextPostionY
> Text coordinates when mouse clicking the element

SCATTERMouseClickTextDrag
>   Whether text is draggable when clicing element
SCATTERMouseDownDisplay
>   Default False, show/not the tooltip when mouse click down a SCATTER point
SCATTERMouseDownColor
>   Color when mouse moving down the element
SCATTERMouseDownCircleSize
>   Circle size when mouse moving down the element
SCATTERMouseDownCircleOpacity
>   Circle opacity when mouse moving down the element
SCATTERMouseDownCircleStrokeColor
>   Circle stroke color when mouse moving down the element
SCATTERMouseDownCircleStrokeWidth
>   Circle stroke width when mouse moving down the element
SCATTERMouseEnterDisplay
>   Default False, show/not the tooltip when mouse mover over a SCATTER point
SCATTERMouseEnterColor
>   Color when mouse entering the element
SCATTERMouseEnterCircleSize
>   Circle size when mouse entering the element
SCATTERMouseEnterCircleOpacity
>   Circle opacity when mouse entering the element
SCATTERMouseEnterCircleStrokeColor
>   Circle stroke color when mouse entering the element
SCATTERMouseEnterCircleStrokeWidth
>   Circle stroke width when mouse entering the element
SCATTERMouseLeaveDisplay
>   Default False, show/not the tooltip when mouse mover leave a SCATTER point
SCATTERMouseLeaveColor
>   Color when mouse leaving the element
SCATTERMouseLeaveCircleSize
>   Circle size when mouse leaving the element
SCATTERMouseLeaveCircleOpacity
>   Circle opacity when mouse leaving the element
SCATTERMouseLeaveCircleStrokeColor
>   Circle stroke color when mouse leaving the element
SCATTERMouseLeaveCircleStrokeWidth
>   Circle stroke width when mouse leaving the element
SCATTERMouseMoveDisplay
>   Default False, show/not the tooltip when mouse move into a SCATTER point
SCATTERMouseMoveColor
>   Color when mouse moving in the element
SCATTERMouseMoveCircleSize
>   Circle size when mouse moving in the element
SCATTERMouseMoveCircleOpacity
>   Circle opacity when mouse moving in the element
SCATTERMouseMoveCircleStrokeColor
>   Circle stroke color when mouse moving in the element

SCATTERMouseMoveCircleStrokeWidth

> Circle stroke width when mouse moving in the element

SCATTERMouseOutDisplay

> Defalut False, hide/not tooltip when mouse is not hovering a SCATTER point anymore

SCATTERMouseOutAnimationTime

> Animation time when mouse moving out the element

SCATTERMouseOutColor

> Color when mouse moving out the element

SCATTERMouseOutCircleSize

> Circle size when mouse moving out the element

SCATTERMouseOutCircleOpacity

> Circle opacity when mouse moving out the element

SCATTERMouseOutCircleStrokeColor

> Circle stroke color when mouse moving out the element

SCATTERMouseOutCircleStrokeWidth

> Circle stroke width when mouse moving out the element

SCATTERMouseUpDisplay

> Default False, show/not the tooltip when mouse click up a SCATTER point

SCATTERMouseUpColor

> Color when mouse moving up the element

SCATTERMouseUpCircleSize

> Circle size when mouse moving up the element

SCATTERMouseUpCircleOpacity

> Circle opacity when mouse moving up the element

SCATTERMouseUpCircleStrokeColor

> Circle stroke color when mouse moving up the element

SCATTERMouseUpCircleStrokeWidth

> Circle stroke width when mouse moving up the element

SCATTERMouseOverDisplay

> Default False, show/not the tooltip when mouse hover on a SCATTER point

SCATTERMouseOverColor

> Color when mouse moving over the element

SCATTERMouseOverCircleSize

> Circle size when mouse moving over the element

SCATTERMouseOverCircleOpacity

> Circle opacity when mouse moving over the element

SCATTERMouseOverCircleStrokeColor

> Circle stroke color when mouse moving over the element

SCATTERMouseOverCircleStrokeWidth

> Circle stroke width when mouse moving over the element

SCATTERMouseOverTooltipsSetting

> Default "style1"

SCATTERMouseOverTooltipsHtml

> Default " "

SCATTERMouseOverTooltipsPosition

> Default "absolute"

SCATTERMouseOverTooltipsBackgroundColor

> Default "white"

SCATTERMouseOverTooltipsBorderStyle
            Default "solid"
SCATTERMouseOverTooltipsBorderWidth
            Default 0
SCATTERMouseOverTooltipsPadding
            Default "3px"
SCATTERMouseOverTooltipsBorderRadius
            Default "3px"
SCATTERMouseOverTooltipsOpacity
            Default 0.8
ARCxlink   Default False, add/not xlink for ARC module
ARCMouseEvent   Default True, open/not open mouse event of ARC module
ARCMouseClickDisplay
            Default False, show/not the tooltip when mouse click on a ARC point
ARCMouseClickColor
            Color when mouse clicking the element
ARCMouseClickArcOpacity
            Arc opacity when mouse clicking the element
ARCMouseClickArcStrokeColor
            Arc stroke color when mouse clicking the element
ARCMouseClickArcStrokeWidth
            Arc stroke width when mouse clicking the element
ARCMouseClickTextFromData
            Text column when mouse clicking the element
ARCMouseClickTextOpacity
            Text opacity when mouse clicking the element
ARCMouseClickTextColor
            Text color when mouse clicking the element
ARCMouseClickTextSize
            Text size when mouse clicking the element
ARCMouseClickTextPostionX, ARCMouseClickTextPostionY
            Text coordinates when mouse clicking the element
ARCMouseClickTextDrag
            Whether text is draggable when mouse clicking the element
ARCMouseDownDisplay
            Default False, show/not the tooltip when mouse click down a ARC point
ARCMouseDownColor
            Color when mouse moving down the element
ARCMouseDownArcOpacity
            Arc opacity when mouse moving down the element
ARCMouseDownArcStrokeColor
            Arc stroke color when mouse moving down the element
ARCMouseDownArcStrokeWidth
            Arc stroke width when mouse moving down the element
ARCMouseEnterDisplay
            Default False, show/not the tooltip when mouse mover over a ARC point
ARCMouseEnterColor
            Color when mouse entering the element

ARCMouseEnterArcOpacity

        Arc opacity when mouse entering the element

ARCMouseEnterArcStrokeColor

        Arc stroke color when mouse entering the element

ARCMouseEnterArcStrokeWidth

        Arc stroke width when mouse entering the element

ARCMouseLeaveDisplay

        Default False, show/not the tooltip when mouse mover leave a ARC point

ARCMouseLeaveColor

        Color when mouse leaving the element

ARCMouseLeaveArcOpacity

        Arc opacity when mouse leaving the element

ARCMouseLeaveArcStrokeColor

        Arc stroke color when mouse leaving the element

ARCMouseLeaveArcStrokeWidth

        Arc stroke width when mouse leaving the element

ARCMouseMoveDisplay

        Default False, show/not the tooltip when mouse move into a ARC point

ARCMouseMoveColor

        Color when mouse moving in the element

ARCMouseMoveArcOpacity

        Arc opacity when mouse moving in the element

ARCMouseMoveArcStrokeColor

        Arc stroke color when mouse moving in the element

ARCMouseMoveArcStrokeWidth

        Arc stroke width when mouse moving in the element

ARCMouseOutDisplay

        Defalut False, hide/not tooltip when mouse is not hovering a ARC point anymore

ARCMouseOutAnimationTime

        Animation time when mouse moving out the element

ARCMouseOutColor

        Color when mouse moving out the element

ARCMouseOutArcOpacity

        Arc opacity when mouse moving out the element

ARCMouseOutArcStrokeColor

        Arc stroke color when mouse moving out the element

ARCMouseOutArcStrokeWidth

        Arc stroke width when mouse moving out the element

ARCMouseUpDisplay

        Default False, show/not the tooltip when mouse click up a ARC point

ARCMouseUpColor

        Color when mouse moving up the element

ARCMouseUpArcOpacity

        Arc opacity when mouse moving up the element

ARCMouseUpArcStrokeColor

        Arc stroke color when mouse moving up the element

ARCMouseUpArcStrokeWidth

        Arc stroke width when mouse moving up the element

ARCMouseOverDisplay

> Default False, show/not the tooltip when mouse hover on a ARC point

ARCMouseOverColor

> Color when mouse moving over the element

ARCMouseOverArcOpacity

> Arc opacity when mouse moving over the element

ARCMouseOverArcStrokeColor

> Arc stroke color when mouse moving over the element

ARCMouseOverArcStrokeWidth

> Arc stroke width when mouse moving over the element

ARCMouseOverTooltipsSetting

> Default "style1"

ARCMouseOverTooltipsHtml

> Default " "

ARCMouseOverTooltipsPosition

> Default "absolute"

ARCMouseOverTooltipsBackgroundColor

> Default "white"

ARCMouseOverTooltipsBorderStyle

> Default "solid"

ARCMouseOverTooltipsBorderWidth

> Default 0

ARCMouseOverTooltipsPadding

> Default "3px"

ARCMouseOverTooltipsBorderRadius

> Default "3px"

ARCMouseOverTooltipsOpacity

> Default 0.8

GENExlink   Default False, add/not xlink for GENE module

GENEMouseEvent   Default True, open/not open mouse event of GENE module

GENEMouseClickDisplay

> Default False, show/not the tooltip when mouse click on a GENE point

GENEMouseClickColor

> Color when mouse clicking the element

GENEMouseClickArcOpacity

> Arc opacity when mouse clicking the element

GENEMouseClickArcStrokeColor

> Arc stroke color when mouse clicking the element

GENEMouseClickArcStrokeWidth

> Arc stroke width when mouse clicking the element

GENEMouseClickTextFromData

> Text column when mouse clicking the element

GENEMouseClickTextOpacity

> Text opacity when mouse clicking the element

GENEMouseClickTextColor

> Text color when mouse clicking the element

GENEMouseClickTextSize

> Text size when mouse clicking the element

GENEMouseClickTextPostionX, GENEMouseClickTextPostionY
> Text coordinates when mouse clicking the element

GENEMouseClickTextDrag
> Whether text is draggable when mouse clicking the element

GENEMouseDownDisplay
> Default False, show/not the tooltip when mouse click down a GENE point

GENEMouseDownColor
> Color when mouse moving down the element

GENEMouseDownArcOpacity
> Arc opacity when mouse moving down the element

GENEMouseDownArcStrokeColor
> Arc stroke color when mouse moving down the element

GENEMouseDownArcStrokeWidth
> Arc stroke width when mouse moving down the element

GENEMouseEnterDisplay
> Default False, show/not the tooltip when mouse mover over a GENE point

GENEMouseEnterColor
> Color when mouse entering the element

GENEMouseEnterArcOpacity
> Arc opacity when mouse entering the element

GENEMouseEnterArcStrokeColor
> Arc stroke color when mouse entering the element

GENEMouseEnterArcStrokeWidth
> Arc stroke width when mouse entering the element

GENEMouseLeaveDisplay
> Default False, show/not the tooltip when mouse mover leave a GENE point

GENEMouseLeaveColor
> Color when mouse leaving the element

GENEMouseLeaveArcOpacity
> Arc opacity when mouse leaving the element

GENEMouseLeaveArcStrokeColor
> Arc stroke color when mouse leaving the element

GENEMouseLeaveArcStrokeWidth
> Arc stroke width when mouse leaving the element

GENEMouseMoveDisplay
> Default False, show/not the tooltip when mouse move into a GENE point

GENEMouseMoveColor
> Color when mouse moving in the element

GENEMouseMoveArcOpacity
> Arc opacity when mouse moving in the element

GENEMouseMoveArcStrokeColor
> Arc stroke color when mouse moving in the element

GENEMouseMoveArcStrokeWidth
> Arc stroke width when mouse moving in the element

GENEMouseOutDisplay
> Defalut False, hide/not tooltip when mouse is not hovering a GENE point anymore

GENEMouseOutAnimationTime
> Animation time when mouse moving out the element

GENEMouseOutColor

        Color when mouse moving out the element

GENEMouseOutArcOpacity

        Arc opacity when mouse moving out the element

GENEMouseOutArcStrokeColor

        Arc stroke color when mouse moving out the element

GENEMouseOutArcStrokeWidth

        Arc stroke width when mouse moving out the element

GENEMouseUpDisplay

        Default False, show/not the tooltip when mouse click up a GENE point

GENEMouseUpColor

        Color when mouse moving up the element

GENEMouseUpArcOpacity

        Arc opacity when mouse moving up the element

GENEMouseUpArcStrokeColor

        Arc stroke color when mouse moving up the element

GENEMouseUpArcStrokeWidth

        Arc stroke width when mouse moving up the element

GENEMouseOverDisplay

        Default False, show/not the tooltip when mouse hover on a GENE point

GENEMouseOverColor

        Color when mouse moving over the element

GENEMouseOverArcOpacity

        Arc opacity when mouse moving over the element

GENEMouseOverArcStrokeColor

        Arc stroke color when mouse moving over the element

GENEMouseOverArcStrokeWidth

        Arc stroke width when mouse moving over the element

GENEMouseOverTooltipsSetting

        Default "style1"

GENEMouseOverTooltipsHtml

        Default " "

GENEMouseOverTooltipsPosition

        Default "absolute"

GENEMouseOverTooltipsBackgroundColor

        Default "white"

GENEMouseOverTooltipsBorderStyle

        Default "solid"

GENEMouseOverTooltipsBorderWidth

        Default 0

GENEMouseOverTooltipsPadding

        Default "3px"

GENEMouseOverTooltipsBorderRadius

        Default "3px"

GENEMouseOverTooltipsOpacity

        Default 0.8

LOLLIPOPxlink   Default False, add/not xlink for LOLLIPOP module

LOLLIPOPMouseEvent

        Default True, open/not open mouse event of LOLLIPOP module

```
LOLLIPOPMouseClickDisplay
```
Default False, show/not the tooltip when mouse click on a LOLLIPOP point
```
LOLLIPOPMouseClickColor
```
Color when mouse clicking
```
LOLLIPOPMouseClickCircleSize
```
Circle size when mouse clicking the element
```
LOLLIPOPMouseClickCircleOpacity
```
Circle opacity when mouse clicking the element
```
LOLLIPOPMouseClickCircleStrokeColor
```
Circle stroke color when mouse clicking the element
```
LOLLIPOPMouseClickCircleStrokeWidth
```
Circle stroke width when mouse clicking the element
```
LOLLIPOPMouseClickTextFromData
```
Text column when mouse clicking the element
```
LOLLIPOPMouseClickTextOpacity
```
Text opacity when mouse clicking the element
```
LOLLIPOPMouseClickTextColor
```
Text color when mouse clicking the element
```
LOLLIPOPMouseClickTextSize
```
Text size when mouse clicking the element
```
LOLLIPOPMouseClickTextPostionX, LOLLIPOPMouseClickTextPostionY
```
Text coordinates when mouse clicking the element
```
LOLLIPOPMouseClickTextDrag
```
Whether text is draggable when mouse clicking the element
```
LOLLIPOPMouseDownDisplay
```
Default False, show/not the tooltip when mouse click down a LOLLIPOP point
```
LOLLIPOPMouseDownColor
```
Color when mouse moving down the element
```
LOLLIPOPMouseDownCircleSize
```
Circle size when mouse moving down the element
```
LOLLIPOPMouseDownCircleOpacity
```
Circle opacity when mouse moving down the element
```
LOLLIPOPMouseDownCircleStrokeColor
```
Circle stroke color when mouse moving down the element
```
LOLLIPOPMouseDownCircleStrokeWidth
```
Circle stroke width when mouse moving down the element
```
LOLLIPOPMouseEnterDisplay
```
Default False, show/not the tooltip when mouse mover over a LOLLIPOP point
```
LOLLIPOPMouseEnterColor
```
Color when mouse entering the element
```
LOLLIPOPMouseEnterCircleSize
```
Circle size when mouse entering the element
```
LOLLIPOPMouseEnterCircleOpacity
```
Circle opacity when mouse entering the element
```
LOLLIPOPMouseEnterCircleStrokeColor
```
Circle stroke color when mouse entering the element
```
LOLLIPOPMouseEnterCircleStrokeWidth
```
Circle stroke width when mouse entering the element

LOLLIPOPMouseLeaveDisplay
             Default False, show/not the tooltip when mouse mover leave a LOLLIPOP point
LOLLIPOPMouseLeaveColor
             Color when mouse leaving the element
LOLLIPOPMouseLeaveCircleSize
             Circle size when mouse leaving the element
LOLLIPOPMouseLeaveCircleOpacity
             Circle opacity when mouse leaving the element
LOLLIPOPMouseLeaveCircleStrokeColor
             Circle stroke color when mouse leaving the element
LOLLIPOPMouseLeaveCircleStrokeWidth
             Circle stroke width when mouse leaving the element
LOLLIPOPMouseMoveDisplay
             Default False, show/not the tooltip when mouse move into a LOLLIPOP point
LOLLIPOPMouseMoveColor
             Color when mouse moving in the element
LOLLIPOPMouseMoveCircleSize
             Circle size when mouse moving in the element
LOLLIPOPMouseMoveCircleOpacity
             Circle opacity when mouse moving in the element
LOLLIPOPMouseMoveCircleStrokeColor
             Circle stroke color when mouse moving in the element
LOLLIPOPMouseMoveCircleStrokeWidth
             Circle stroke width when mouse moving in the element
LOLLIPOPMouseOutDisplay
             Defalut False, hide/not tooltip when mouse is not hovering a LOLLIPOP point
             anymore
LOLLIPOPMouseOutAnimationTime
             Animation time when mouse moving out the element
LOLLIPOPMouseOutColor
             Color when mouse moving out the element
LOLLIPOPMouseOutCircleSize
             Circle size when mouse moving out the element
LOLLIPOPMouseOutCircleOpacity
             Circle opacity when mouse moving out the element
LOLLIPOPMouseOutCircleStrokeColor
             Circle stroke color when mouse moving out the element
LOLLIPOPMouseOutCircleStrokeWidth
             Circle stroke width when mouse moving out the element
LOLLIPOPMouseUpDisplay
             Default False, show/not the tooltip when mouse click up a LOLLIPOP point
LOLLIPOPMouseUpColor
             Color when mouse moving up the element
LOLLIPOPMouseUpCircleSize
             Circle size when mouse moving up the element
LOLLIPOPMouseUpCircleOpacity
             Circle opacity when mouse moving up the element

LOLLIPOPMouseUpCircleStrokeColor
                Circle stroke color when mouse moving up the element
LOLLIPOPMouseUpCircleStrokeWidth
                Circle stroke width when mouse moving up the element
LOLLIPOPMouseOverDisplay
                Default False, show/not the tooltip when mouse hover on a LOLLIPOP point
LOLLIPOPMouseOverColor
                Color when mouse moving over the element
LOLLIPOPMouseOverCircleSize
                Circle size when mouse moving over the element
LOLLIPOPMouseOverCircleOpacity
                Circle opacity when mouse moving over the element
LOLLIPOPMouseOverCircleStrokeColor
                Circle stroke color when mouse moving over the element
LOLLIPOPMouseOverCircleStrokeWidth
                Circle stroke width when mouse moving over the element
LOLLIPOPMouseOverTooltipsSetting
                Default "style1"
LOLLIPOPMouseOverTooltipsHtml
                Default " "
LOLLIPOPMouseOverTooltipsPosition
                Default "absolute"
LOLLIPOPMouseOverTooltipsBackgroundColor
                Default "white"
LOLLIPOPMouseOverTooltipsBorderStyle
                Default "solid"
LOLLIPOPMouseOverTooltipsBorderWidth
                Default 0
LOLLIPOPMouseOverTooltipsPadding
                Default "3px"
LOLLIPOPMouseOverTooltipsBorderRadius
                Default "3px"
LOLLIPOPMouseOverTooltipsOpacity
                Default 0.8
elementId   the name of the HTML id to be used to contain the visualization
...   Ignored

Value

The main figure for interacCircos with all tracks

Examples

```
Circos(genome = "hg19")
```

CircosArc   *ARC module*

Description

Create the CNV plot without value, Gene domain, Chromosome band

Usage

```
CircosArc(
  modulename,
  compareGroup = 1,
  outerRadius = 150,
  innerRadius = 130,
  opacity = 1,
  animationDisplay = FALSE,
  animationTime = 2000,
  animationDelay = 20,
  animationType = "bounce",
  data,
  ...
)
```

Arguments

modulename	The name of the new module
compareGroup	The group number of this module in compare module
innerRadius, outerRadius	
	Where the module should begin and end
opacity	The opacity for arc
animationDisplay	
	Whether display animation
animationTime, animationDelay, animationType	
	The time, delay and display type for animation
data	A list of arc with details including chr, start, end, color, des, link and html. Details can be found on document
...	Ignored

Value

The module tracks for arc modules

Examples

```
arcData<-arcExample
Circos(CircosArc('Arc01', outerRadius = 212, innerRadius = 224, data=arcData),
 genome=list("EGFR"=1211),outerRadius = 220,genomeFillColor = c("grey"))
```

CircosAuxLine *AUXILIARYLINE module*

Description

A auxiliary line for better explaination of the visualization

Usage

```
CircosAuxLine(
  modulename,
  startX = 20,
  startY = 20,
  endX = 120,
  endY = 120,
  color = "red",
  width = 0.5,
  type = "straight",
  controlPointX = 0,
  controlPointY = 0,
  lineType = "solid",
  dashArray = 3,
  marker = TRUE,
  markerType = "circle",
  markerColor = "blue",
  markerHeight = 5,
  markerWidth = 5,
  markerPosition = 2,
  animationDisplay = FALSE,
  animationTime = 50,
  animationDelay = 1000,
  animationType = "linear",
  ...
)
```

Arguments

modulename	The name of the new module
startX, startY	Start coordinates for auxiliary line
endX, endY	End coordinates for auxiliary line
color	Color for auxiliary line
width	Width for auxiliary line
type	Type for auxiliary line, could be straight/curve/broken
controlPointX, controlPointY	
	The middle point coordinates for curve and broken
lineType	Line type, could be solid/dot
dashArray	The dash gap width
marker	Whether display a marker on the end of line

markerType   Type of marker, could be circle/square/arrow/stub

markerColor, markerHeight, markerWidth
                  Color, Height and Width for marker

markerPosition   1 means start, 2 means end, 3 means both

animationDisplay
                  whether display animation

animationTime, animationDelay, animationType
                  The time, delay and display type for animation

...   Ignored

Value

The module tracks for auxliary line modules

Examples

```
Circos(CircosAuxLine('AuxLine01'))
```

CircosBackground   *BACKGROUND module*

Description

Background for better display of other modules

Usage

```
CircosBackground(
  modulename,
  compareGroup = 1,
  fillColors = "#EEEEFF",
  borderColors = "#000000",
  axisShow = FALSE,
  axisColor = "#000",
  axisOpacity = 0.5,
  axisNum = 4,
  axisWidth = 0.3,
  maxRadius = 190,
  minRadius = 105,
  borderSize = 0.3,
  animationDisplay = FALSE,
  animationTime = 2000,
  animationDelay = 20,
  animationType = "bounce",
  ...
)
```

Arguments

`modulename`	The name of the new module
`compareGroup`	The group number of this module in compare module
`fillColors`	The filling color of the module
`borderColors`	The border color of the module
`axisShow`	Whether show a axis or not
`axisWidth, axisColor, axisOpacity, axisNum`	
	The color, opacity value and number of line for axis
`minRadius, maxRadius`	
	The outer and inner ring range of module
`borderSize`	The thickness of the border
`animationDisplay`	
	Whether display animation or not
`animationTime, animationDelay, animationType`	
	The time, delay and display type for animation
`...`	Ignored

Value

The module tracks for background modules.

Examples

```
Circos(CircosBackground('bg01', fillColors="#FFEEEE", borderSize = 1))
```

CircosBubble   *BUBBLE module*

Description

Create a bubble plot

Usage

```
CircosBubble(
  modulename,
  compareGroup = 1,
  maxRadius = 200,
  minRadius = 50,
  blockStroke = TRUE,
  blockStrokeColor = "black",
  blockStrokeWidth = 1,
  blockFill = FALSE,
  blockFillColor = "white",
  bubbleMaxSize = 5,
  bubbleMinSize = 2,
  minColor = "red",
  maxColor = "green",
```

```
    ValueAxisManualScale = FALSE,
    ValueAxisMaxScale = 10,
    ValueAxisMinScale = 0,
    totalLayer = 1,
    animationDisplay = FALSE,
    animationTime = 2000,
    animationDelay = 20,
    animationType = "bounce",
    data,
    ...
)
```

Arguments

modulename	The name of the new module
compareGroup	The group number of this module in compare module
maxRadius, minRadius	
	The outer and inner ring range of module
blockStroke	Whether display the stroke between each bubble block
blockStrokeColor	
	Stroke color for block
blockStrokeWidth	
	Stroke width for block
blockFill	Whether fill a block or not
blockFillColor	The color for filling the block
bubbleMaxSize	The max size for bubble
bubbleMinSize	The min size for bubble
minColor	The color the bubble of min value
maxColor	The color the bubble of max value
ValueAxisManualScale	
	Whether manually control the scale of value
ValueAxisMaxScale, ValueAxisMinScale	
	The max and min scale value for manually control
totalLayer	The color and width for stroke
animationDisplay	
	Whether display animation
animationTime, animationDelay, animationType	
	The time, delay and display type for animation
data	A list of value in bubble plot with details including chr, start, end, value, name, layer, color and html. Details can be found on document
...	Ignored

Value

The module tracks for bubble modules

Examples

```
bubbleData<-bubbleExample
Circos(CircosBubble('Bubble01', maxRadius = 230, minRadius = 170, data=bubbleData,
blockStroke = TRUE, bubbleMaxSize =10, bubbleMinSize = 2, maxColor = "red", minColor = "yellow",
totalLayer =3, animationDisplay = TRUE, animationType="linear"),
genome = list("2L"=23011544,"2R"=21146708,"3L"=24543557,"3R"= 27905053,"X"=22422827,"4"=1351857),
BUBBLEMouseOverDisplay =TRUE,innerRadius = 236)
```

CircosChord *CHORD module of NG-Circos*

Description

Create a chord module using a data matrix

Usage

```
CircosChord(
  modulename,
  innerRadius = 237,
  outerRadius = 238,
  fillOpacity = 0.67,
  fillStrokeWidth = 1,
  padding = 0.06,
  autoFillColor = TRUE,
  fillColor = c("#B8B8B8"),
  fillStrokeColor = c("black"),
  outerARC = TRUE,
  outerARCAutoColor = TRUE,
  outerARCColor = c("red"),
  outerARCStrokeColor = c("black"),
  outerARCText = TRUE,
  data,
  ...
)
```

Arguments

modulename	The name of the new module
innerRadius	The inner radius for chord circle
outerRadius	The outer radius for chord circle
fillOpacity	The opacity for filling color
fillStrokeWidth	
	The stroke width for chord
padding	The pad of chord
autoFillColor	Whether auto assign color for chord
fillColor	If not, manually assign color for chord

fillStrokeColor

> The color for stroke

outerARC   Whether display outer arc

outerARCAutoColor

> If true, whether auto assign color for arc

outerARCColor   The manullay assigned color for arc

outerARCStrokeColor

> The stroke color for arc

outerARCText   Whether display text for arc or not

data   A matrix-list of chord value with relationship details

...   Ignored

Value

The module tracks for chord modules of NG-Circos

Examples

```
chordData<-chordExample
Circos(CircosChord('CHORD', data = chordData,innerRadius= 210,outerRadius= 211,fillOpacity=0.67,
strokeColor="black",strokeWidth= "1px",outerARCText=FALSE),genome=list("C.CK" = 189.51,"C.NPK"=188,
"GC.CK"=186.11, "GC.NPK"=191.51,"Alphaproteobacteria"=70.16,"Betaproteobacteria"=23.51,
"Gammaproteobacteria"=25.51, "Deltaproteobacteria"=23.28,"Acidobacteria"=53.62,
"Actinobacteria"=72.33, "Bacteroidetes"=22.41, "Chloroflexi"=15.08,"Firmicutes"=10.72,
"Gemmatimonadetes"=26.37, "Planctomycetes"=19.26,"Thaumarchaeota"=6.15, "Verrucomicrobia"=8.3,
"Ascomycota"=159.41, "Basidiomycota"=79.73,"Zygomycota"=139.29 ),outerRadius = 217,
genomeLabelDisplay = FALSE)
```

CircosChord.p   *CHORD module of circosJS*

Description

Create a chord module using a data path. chord.p meaens chord plot based on path

Usage

```
CircosChord.p(
  modulename,
  radius = 216,
  opacity = 0.67,
  color = "#B8B8B8",
  data,
  ...
)
```

Arguments

`modulename`	The name of the new module
`radius`	The radius for chord circle
`opacity`	The opacity for chord
`color`	The color for chord
`data`	A list of chord value with relationship details, details could be found on chord.pExample
`...`	Ignored

Value

The module tracks for chord modules of circosJS

Examples

```
chord.pData<-chord.pExample
Circos()
```

CircosCnv	*CNV module*

Description

Create a copy number variance module

Usage

```
CircosCnv(
  modulename,
  compareGroup = 1,
  maxRadius = 200,
  minRadius = 190,
  width = 10,
  color = "#CAE1FF",
  ValueAxisManualScale = FALSE,
  ValueAxisMaxScale = 10,
  ValueAxisMinScale = 0,
  strokeColor = "black",
  strokeWidth = 1,
  opacity = 1,
  animationDisplay = FALSE,
  animationTime = 2000,
  animationDelay = 50,
  animationType = "bounce",
  data,
  ...
)
```

Arguments

`modulename`	The name of the new module
`compareGroup`	The group number of this module in compare module
`maxRadius, minRadius`	
	The outer and inner ring range of module
`width`	Width for CNV module
`color`	Color for CNV module
`ValueAxisManualScale`	
	Whether manually control the scale of value or not
`ValueAxisMaxScale, ValueAxisMinScale`	
	The max and min scale value for manually control
`strokeColor, strokeWidth`	
	The color and width for stroke
`opacity`	The opacity for module
`animationDisplay`	
	Whether display animationn
`animationTime, animationDelay, animationType`	
	The time, delay and display type for animationn
`data`	A list of CNV with details including start, end, value, link, color and html. Details can be found on document
`...`	Ignored

Value

The module tracks for cnv modules

Examples

```
cnvData<-cnvExample
Circos(CircosCnv('Cnv01',maxRadius =175, minRadius =116, data =cnvData,width=2,color = "#4876FF")+
CircosBackground("bg01",minRadius = 116,maxRadius = 175,fillColors = "#F2F2F2",axisShow = TRUE),
CNVMouseOverDisplay = TRUE)
```

CircosGene	*GENE module*

Description

Create a number of genes with different functional region

Usage

```
CircosGene(
  modulename,
  compareGroup = 1,
  outerRadius = 180,
  innerRadius = 150,
  pathColor = "black",
  pathWidth = 1,
  arrow = TRUE,
  arrowGap = 2,
  arrowColor = "blue",
  arrowSize = 5,
  cdsColor = "#1e77b3",
  cdsStrokeColor = "black",
  cdsStrokeWidth = 1,
  utrWidth = -5,
  utrColor = "blue",
  utrStrokeColor = "blue",
  utrStrokeWidth = 1,
  animationDisplay = FALSE,
  animationTime = 2000,
  animationDelay = 20,
  animationType = "bounce",
  data,
  ...
)
```

Arguments

`modulename`	The name of the new module
`compareGroup`	The group number of this module in compare module
`outerRadius, innerRadius`	
	Where the module should begin and end
`pathColor`	The color for path between gene elements
`pathWidth`	The width for path between gene elements
`arrow`	Whether display arrows on path
`arrowGap, arrowColor, arrowSize`	
	The gap, color and size for arrow
`cdsColor, cdsStrokeColor, cdsStrokeWidth`	
	The color, stroke color and stroke width for coding
`utrWidth, utrColor, utrStrokeColor, utrStrokeWidth`	
	The max size for bubble
`animationDisplay`	
	Whether display animation
`animationTime, animationDelay, animationType`	
	The time, delay and display type for animation
`data`	A list of gene with details including chr, strand, start, end, type, name, link and html. Details can be found on document
`...`	Ignored

Value

The module tracks for gene modules

Examples

```
geneData<-geneExample
Circos(CircosGene('Gene01', outerRadius = 195, innerRadius = 180, data=geneData,arrowGap = 10,
 arrowColor = "black",arrowSize = "12px",cdsColor = "#1e77b3",cdsStrokeColor = "#1e77b3",
 cdsStrokeWidth= 5, utrWidth= -2,utrColor= "#fe7f0e",utrStrokeColor= "#fe7f0e",
 animationDisplay = TRUE),genome =list("EGFR"=1000), outerRadius = 220)
```

CircosHeatmap   *HEATMAP module*

Description

Create a heatmap plot

Usage

```
CircosHeatmap(
  modulename,
  compareGroup = 1,
  maxRadius = 180,
  minRadius = 100,
  minColor = "red",
  maxColor = "green",
  ValueAxisManualScale = FALSE,
  ValueAxisMaxScale = 10,
  ValueAxisMinScale = 0,
  totalLayer = 1,
  animationDisplay = FALSE,
  animationDirection = "O2I",
  animationColorDirection = "L2C",
  animationTime = 2000,
  animationDelay = 20,
  animationType = "bounce",
  data,
  ...
)
```

Arguments

modulename	The name of the new module
compareGroup	The group number of this module in compare module
maxRadius, minRadius	
	Where the module should begin and end
minColor	The color for heatmap of min value
maxColor	The color for heatmap of max value

ValueAxisManualScale

> Whether manually control the scale of value

ValueAxisMaxScale, ValueAxisMinScale

> The max and min scale value for manually control

totalLayer   The color and width for stroke

animationDisplay

> Whether display animation

animationDirection

> The direction for animation. O2I: from outside to inside, I2O: from inside to outside

animationColorDirection

> The color changing in animation. L2C: lowest to customized, H2C: highest to customized, the customized color should be defined in data

animationTime, animationDelay, animationType

> The time, delay and display type for animation

data   A list of value in heatmap plot with details including chr, start, end, value, name, layer and html. Details can be found on document

...   Ignored

Value

The module tracks for heatmap modules.

Examples

```
heatmapData<-heatmapExample
Circos(CircosHeatmap('Heatmap01', maxRadius= 180, minRadius = 100, data=heatmapData,totalLayer = 3),
genome = list("2L"=23011544,"2R"=21146708,"3L"=24543557,"3R"=27905053,"4"=1351857,"X"=22422827),
HEATMAPMouseEvent = TRUE,HEATMAPMouseOverDisplay = TRUE)
```

CircosHistogram   *HISTOGRAM module*

Description

Create a multi-layer histogram plot

Usage

```
CircosHistogram(
  modulename,
  compareGroup = 1,
  maxRadius = 108,
  minRadius = 95,
  ValueAxisManualScale = FALSE,
  ValueAxisMaxScale = 10,
  ValueAxisMinScale = 0,
  fillColor = "red",
  animationDisplay = FALSE,
```

```
    animationTime = 2000,
    animationDelay = 20,
    data,
    ...
)
```

Arguments

`modulename`	The name of the new module
`compareGroup`	The group number of this module in compare module
`maxRadius, minRadius`	
	Where the module should begin and end
`ValueAxisManualScale`	
	Whether manually control the scale of value
`ValueAxisMaxScale, ValueAxisMinScale`	
	The max and min scale value for manually control
`fillColor`	The color for histgram
`animationDisplay`	
	Whether display animation
`animationTime, animationDelay`	
	The time and delay for animation
`data`	A list of value with details including chr, start, end, name, link, value and html. Details can be found on document
`...`	Ignored

Value

The module tracks for histogram modules

Examples

```
histogramData<-histogramExample
Circos(CircosHistogram('HISTOGRAM01', data = histogramData,fillColor= "#ff7f0e",maxRadius = 210,
minRadius = 175),genome=list("2L"=23011544,"2R"=21146708,"3L"=24543557,"3R"= 27905053,
"X"=22422827,"4"=1351857),
outerRadius = 220)
```

`CircosLegend`	*LEGEND module*

Description

Simple legend annotation displayed in the visualization

Usage

```
CircosLegend(
  modulename,
  x = 20,
  y = 20,
  title = "legend",
  size = 6,
  weight = "normal",
  GapBetweenGraphicText = 5,
  GapBetweenLines = 20,
  data,
  ...
)
```

Arguments

modulename	The name of the new module
x, y	The coordinates if legend
title	The title for legend
size	Font size for title
weight	Font weight for title. Should be either "normal", "bold", "bolder" or "lighter"
GapBetweenGraphicText	
	Gap between icon and text in legend
GapBetweenLines	
	Gap between each two lines in legend
data	A list of legend with details including type, color, opacity, circleSize, rectSize, lineWidth, lineHeight, text, textSize and textWeight. Details can be found on document
...	Ignored

Value

The module tracks for legend modules.

Examples

```
legend1 <- list(type= "circle", color="#1E77B4",opacity="1.0",circleSize="8",text= "C.CK",
textSize= "14",textWeight="normal")
legend2 <- list(type= "circle", color="#AEC7E8",opacity="1.0",circleSize="8",text= "C.NPK",
textSize= "14",textWeight="normal")
Circos(CircosLegend('legend01', title = "legend",data=list(legend1,legend2),size = 20))
```

CircosLine   *LINE module*

Description

Create a multi-layer line plot

Usage

```
CircosLine(
  modulename,
  compareGroup = 1,
  maxRadius = 108,
  minRadius = 95,
  ValueAxisManualScale = FALSE,
  ValueAxisMaxScale = 10,
  ValueAxisMinScale = 0,
  color = "red",
  width = 2,
  type = "cardinal",
  animationDisplay = FALSE,
  animationDirection = "S2E",
  animationTime = 2000,
  animationDelay = 20,
  animationType = "bounce",
  data,
  ...
)
```

Arguments

modulename	The name of the new module
compareGroup	The group number of this module in compare module
maxRadius, minRadius	
	Where the module should begin and end
ValueAxisManualScale	
	Whether manually control the scale of value
ValueAxisMaxScale, ValueAxisMinScale	
	The max and min scale value for manually control
color	Color for line
width	Width for line
type	Type for line, could be linear, cardinal, basis and monotone
animationDisplay	
	Whether display animation
animationDirection	
	The direction of animation, could be S2E(start to end) or E2S(end to start)
animationTime, animationDelay, animationType	
	The time, delay and display type for animation

data	A list of value with details including chr, pos, des, value and html. Details can be found on document
...	Ignored

Value

The module tracks for line modules

Examples

```
lineData<-lineExample
Circos(CircosLine('LINE01', data = lineData,maxRadius=200,minRadius=150,color= "#ff0031")+
CircosBackground('BG01',minRadius = 205,maxRadius = 150))
```

CircosLink   *LINK module*

Description

Create a link of two specific region in genome

Usage

```
CircosLink(
  modulename,
  compareGroup = 1,
  radius = 108,
  fillColor = "red",
  width = 3,
  type = "Q",
  displayLinkAxis = TRUE,
  axisColor = "#B8B8B8",
  axisWidth = 0.5,
  axisPad = 3,
  displayLinkLabel = TRUE,
  labelColor = "red",
  labelSize = 13,
  labelPad = 8,
  animationDisplay = FALSE,
  animationDirection = "1to2",
  animationTime = 2000,
  animationDelay = 20,
  animationType = "bounce",
  data,
  ...
)
```

Arguments

`modulename`	The name of the new module
`compareGroup`	The group number of thic module in compare module
`radius`	Radius of link circle
`fillColor`	Color for link
`width`	Width for link
`type`	Type of link, could be Q/S/T
`displayLinkAxis`	
	Whether display axis for link or not
`axisColor`	The color for axis
`axisWidth`	The width for axis
`axisPad`	The pad for axis
`displayLinkLabel`	
	Whether display label for link or not
`labelColor`	The color for label
`labelSize`	The size for label
`labelPad`	The pad for label
`animationDisplay`	
	Whether display animation
`animationDirection`	
	The direction of link animation, could be 1to2 or 2to1
`animationTime, animationDelay, animationType`	
	The time, delay and display type for animation
`data`	A list of link with details including g1chr, g1start, g1end, g2chr, g2start, g2end, g1name, g2name, fusion, link and html. Details can be found on document
`...`	Ignored

Value

The module tracks for link modules

Examples

```
linkData<-linkExample
Circos(CircosLink('LINK', data = linkData,LinkRadius= 140,fillColor= "#9e9ac6",width= 2,
axisPad= 3,labelPad=8,animationDisplay=TRUE,animationDirection="1to2", animationType= "linear" ))
```

CircosLollipop *LOLLIPOP module*

Description

Create a lollipop plot

Usage

```
CircosLollipop(
  modulename,
  compareGroup = 1,
  fillColor = "#9400D3",
  secondColor = "#FFFFFF",
  pointType = "circle",
  circleSize = 2,
  diamondWidth = 10,
  diamondHeight = 5,
  rectWidth = 2,
  rectHeight = 2,
  stroke = TRUE,
  strokeColor = "#000000",
  strokeWidth = 0.5,
  lineAutoHeight = TRUE,
  lineAutoMaximumHeightZoomRate = 1,
  lineHeightRate = 0.75,
  lineWidth = 2,
  lineColor = "#000000",
  realStart = 0,
  ValueAxisManualScale = FALSE,
  ValueAxisMaxScale = 10,
  ValueAxisMinScale = 0,
  animationDisplay = FALSE,
  animationTime = 2000,
  animationDelay = 20,
  animationType = "bounce",
  data,
  ...
)
```

Arguments

modulename	The name of the new module
compareGroup	The group number of this module in compare module
fillColor	Filling color for lollipop
secondColor	Second filling color for heterogeneous lollipop
pointType	The type for lollipop, could be circle, rect and diamond
circleSize	If circle, the size for lollipop
diamondWidth, diamondHeight	
	If diamond, the width and height for lollipop

`rectWidth, rectHeight`	
	If rect, the width and height for lollipop
`stroke`	Whether display the stroke for lollipop
`strokeColor, strokeWidth`	
	The color and width for stroke
`lineAutoHeight`	Whether auto assign the height for each lollipop
`lineAutoMaximumHeightZoomRate`	
	If auto assign, the zoom rate for each lollipop
`lineHeightRate`	If manually assign, the rate of lollipop compared to real value
`lineWidth, lineColor`	
	The width and color for the line of lollipop
`realStart`	The real start position for data in genome
`ValueAxisManualScale`	
	Whether manually control the scale of value
`ValueAxisMaxScale, ValueAxisMinScale`	
	The max and min scale value for manually control
`animationDisplay`	
	Whether display animation
`animationTime, animationDelay, animationType`	
	The time, delay and display type for animation
`data`	A list of lollipop value with details including protein, chr, pos, strand, Cancer-TypeNumber, color, link, Consequence, AA_pos, AA_change, type, link and html. Details can be found on document
`...`	Ignored

Value

The module tracks for lollipop modules.

Examples

```
lollipopData<-lollipopExample
arcData<-arcExample
Circos(CircosLollipop('Lollipop01', data=lollipopData, fillColor="#9400D3",
circleSize= 6, strokeColor= "#999999", strokeWidth= "1px", animationDisplay=TRUE, lineWidth= 2,
realStart= 101219350)+CircosArc('Arc01', outerRadius = 212, innerRadius = 224, data=arcData),
 genome=list("EGFR"=1211),outerRadius = 220,genomeFillColor = c("grey"))
```

CircosModuleList *Create a list of modules*

Description

This allows the use of the '+' and '-' operator on these lists

Usage

```
CircosModuleList()

## S3 method for class 'CircosModuleList'
x + ...

## S3 method for class 'CircosModuleList'
x - ...
```

Arguments

x   The moduleList on which other modules should be added or removed

...   The modules to add (as moduleLists) or to remove (as module names)

Value

The list of all tracks of modules.

CircosScatter   *SCATTER module*

Description

Create a point plot

Usage

```
CircosScatter(
  modulename,
  compareGroup = 1,
  radius = 140,
  innerCircleSize = 1,
  outerCircleSize = 5,
  innerCircleColor = "#F26223",
  outerCircleColor = "#F26223",
  innerPointType = "circle",
  outerPointType = "circle",
  innerrectWidth = 2,
  innerrectHeight = 2,
  outerrectWidth = 2,
  outerrectHeight = 2,
  outerCircleOpacity = 1,
  random_data = 0,
  animationDisplay = FALSE,
  animationInitialPositionX = 0,
  animationInitialPositionY = 0,
  animationTime = 2000,
  animationDelay = 20,
  animationType = "bounce",
  data,
  ...
)
```

Arguments

`modulename`	The name of the new module
`compareGroup`	The group number of this module in compare module
`radius`	Radius of scatter circle
`innerCircleSize, outerCircleSize`	
	If circle, inner and outer circle size
`innerCircleColor, outerCircleColor`	
	If circle, inner and outer circle color
`innerPointType, outerPointType`	
	The type for inner and outer point, could be circle or rect
`innerrectWidth, innerrectHeight`	
	If rect, inner width and height
`outerrectWidth, outerrectHeight`	
	If rect, inner width and height
`outerCircleOpacity`	
	If circle, the opacity for outer circle
`random_data`	Scatter position fluctuation
`animationDisplay`	
	Whether display animation
`animationInitialPositionX, animationInitialPositionY`	
	The initial coordinates for animation
`animationTime, animationDelay, animationType`	
	The time, delay and display type for animation
`data`	A list of value with details including chr, start, end, name, des, link and html. Details can be found on document
`...`	Ignored

Value

The module tracks for scatter modules

Examples

```
scatterData<-scatterExample
Circos(CircosScatter('SCATTER01', data = scatterData,radius=180,innerCircleColor= "#3d6390",
outerCircleColor= "#99cafe",random_data= 40))
```

`CircosSnp`	*SNP module*

Description

Create SNPs are defined by genomic coordinates and associated with a numerical value

Usage

```
CircosSnp(
  modulename,
  compareGroup = 1,
  minRadius = 153,
  maxRadius = 205,
  fillColorType = "specific",
  fillColor = "#9400D3",
  fillr2Color = c("13#ff0031", "#ff0031", "#ff0031", "#ff0031", "#ff0031"),
  ValueAxisManualScale = FALSE,
  ValueAxisMaxScale = 10,
  ValueAxisMinScale = 0,
  pointType = "circle",
  circleSize = 2,
  rectWidth = 2,
  rectHeight = 2,
  animationDisplay = FALSE,
  animationInitialPositionX = 0,
  animationInitialPositionY = 0,
  animationTime = 2000,
  animationDelay = 20,
  animationType = "bounce",
  data,
  ...
)
```

Arguments

`modulename`	The name of the new module
`compareGroup`	The group number of this module in compare module
`maxRadius, minRadius`	
	Where the module should begin and end
`fillColorType`	The type of filling color, could be either specific or r2(means based on r2)
`fillColor`	If specific, the color for SNP filling
`fillr2Color`	If r2, the color for SNP filling
`ValueAxisManualScale`	
	Whether manually control the scale of value
`ValueAxisMaxScale, ValueAxisMinScale`	
	The max and min scale value for manually control
`pointType`	The type of SNP point, could be circle or rect
`circleSize`	If circle, the size for SNP circle
`rectWidth`	If rect, the width for SNP rect
`rectHeight`	If rect, the height for SNP rect
`animationDisplay`	
	Whether display animation
`animationInitialPositionX, animationInitialPositionY`	
	The initial position coordinates for animation
`animationTime, animationDelay, animationType`	
	The time, delay and display type for animation

data	A list of SNP value with details including chr, pos, value, des, color, r2value, link, index, image and html. Details can be found on document
...	Ignored

Value

The module tracks for snp modules

Examples

```
snpData<-snpExample
Circos(CircosSnp('SNP01', minRadius =150, maxRadius = 190, data = snpExample,fillColor= "#9ACD32",
    circleSize= 2, SNPAnimationDisplay=TRUE,SNPAnimationTime= 2000,SNPAnimationDelay= 0,
  SNPAnimationType= "linear") + CircosBackground('BG01',minRadius = 145, maxRadius = 200))
```

CircosText   *Text module*

Description

Text for better explaination of other modules

Usage

```
CircosText(
  modulename,
  text,
  x = 0,
  y = 0,
  size = "1.2em",
  weight = "bold",
  opacity = 1,
  color = "#000000",
  rotateRate = 0,
  animationDisplay = FALSE,
  animationInitialSize = 20,
  animationInitialWeight = "bold",
  animationInitialColor = "black",
  animationInitialOpacity = 1,
  animationInitialPositionX = 0,
  animationInitialPositionY = 0,
  animationInitialRotate = 0,
  animationDelay = 50,
  animationTime = 1000,
  animationType = "linear",
  ...
)
```

Arguments

`modulename`	The name of the new module
`text`	The details of text
`x, y`	The coordinates of the text
`size`	Font size
`weight`	Font weight. Should be either "normal", "bold", "bolder" or "lighter"
`opacity`	Font opacity
`color`	Font color
`rotateRate`	ratate rate for text

`animationDisplay`
> Whether display animation or not

`animationInitialSize`
> Initial text size in animation

`animationInitialWeight`
> Initial text weight in animation

`animationInitialColor`
> Initial text color in animation

`animationInitialOpacity`
> Initial text opacity in animation

`animationInitialPositionX, animationInitialPositionY`
> Initial text coordinates in animation(The parameter x,y will become the final position for text if animation displayed)

`animationInitialRotate`
> Initial rotate rate in animation

`animationTime, animationDelay, animationType`
> The time, delay and display type for animation

`...`	Ignored

Value

The module tracks for text modules.

Examples

```
Circos(CircosText('text01', 'Annotation', color = '#DD2222', x = -40))
```

`CircosWig`	*WIG module*

Description

Create a multi-layer line plot

Usage

```
CircosWig(
  modulename,
  compareGroup = 1,
  maxRadius = 108,
  minRadius = 95,
  direction = "out",
  ValueAxisManualScale = FALSE,
  ValueAxisMaxScale = 10,
  ValueAxisMinScale = 0,
  color = "red",
  opacity = 1,
  strokeColor = "black",
  strokeWidth = 1,
  strokeType = "cardinal",
  animationDisplay = FALSE,
  animationTime = 2000,
  animationDelay = 20,
  animationType = "bounce",
  data,
  ...
)
```

Arguments

`modulename`	The name of the new module
`compareGroup`	The group number of this module in compare module
`maxRadius, minRadius`	
	Where the module should begin and end
`direction`	The direction of plot, either inside or outside
`ValueAxisManualScale`	
	Whether manually control the scale of value
`ValueAxisMaxScale, ValueAxisMinScale`	
	The max and min scale value for manually control
`color`	Color for plot
`opacity`	Opacity for plot
`strokeColor`	The color for stroke
`strokeWidth`	The width for stroke
`strokeType`	Line type for stroke, could be linear, cardinal, basis and monotone
`animationDisplay`	
	Whether display animation
`animationTime, animationDelay, animationType`	
	The time, delay and display type for animation
`data`	A list of value with details including chr, pos, des, value and html. Details can be found on document
`...`	Ignored

Value

The module tracks for wig modules

Examples

```
wigData<-wigExample
Circos(CircosWig('WIG01', data = wigData, maxRadius= 200,minRadius= 150,strokeColor= "darkblue",
color= "lightblue",strokeType= "cardinal")+CircosBackground('BG01',minRadius = 205,maxRadius = 150)
,genome=list("chr8"=1000),outerRadius = 220)
```

---

cnvExample   *Cnv module example data*

Description

The data is in matrix with column names

Usage

```
cnvExample
```

Format

A data frame with 7 columns:

chr chromosome

start start position

end end position

value value

link hyperlink for cnv

color color

html The external html language

---

geneExample   *Gene plot example data*

Description

The data is in matrix with column names

Usage

```
geneExample
```

Format

A data frame with 8 columns:

chr chromosome

strand strand, - or +

start start position

end end position

type region type, gene or utr or cds

name name for description

link hyperlink for this region

html The external html language

---

heatmapExample   *Heatmap plot example data*

Description

The data is in matrix with column names

Usage

```
heatmapExample
```

Format

A data frame with 7 columns:

chr chromosome

start start position

end end position

name name for description

value value

layer layer number

html The external html language

---

hg19_ideogram *Ideogram for hg19*

Description

The ideogram for human hg19 reference including the color for each region

Usage

hg19_ideogram

Format

A data frame with 4 columns:

chr chromosome

start start position

end end position

color color

---

histogramExample *Histogram plot example data*

Description

The data is in matrix with column names

Usage

histogramExample

Format

A data frame with 7 columns:

chr chromosome

start start position

end end position

name name for description

link hyperlink

value value

html The external html language

---

lineExample	*Line plot example data*

Description

The data is in matrix with column names

Usage

```
lineExample
```

Format

A data frame with 5 columns:

chr chromosome
pos position
des description
value value
html The external html language

---

linkExample	*Link plot example data*

Description

The data is in matrix with column names

Usage

```
linkExample
```

Format

A data frame with 11 columns:

g1chr first chromosome
g1start first start position
g1end first end position
g2chr second chromosome
g2start second start position
g2end second end position
g1name first name
g2name second name
fusion fusion name
link hyperlink for link line
html The external html language

lollipopExample *Lollipop plot example data*

Description

The data is in matrix with column names

Usage

```
lollipopExample
```

Format

A data frame with 12 columns:

protein protein name

chr chromosome

pos position

strand strand, - or +

CancerTypeNumber Cancer type number

color color

link hyperlink

Consequence consequence

AA_pos AA_pos

AA_change AA_change

type type for mutation,Hetero or Homo

html The external html language

scatterExample *Scatter plot example data*

Description

The data is in matrix with column names

Usage

```
scatterExample
```

Format

A data frame with 7 columns:

chr chromosome

start start position

end end position

name name for scatter

des description

link hyperlink

html The external html language

---

snpExample   *Snp plot example data*

Description

The data is in matrix with column names

Usage

snpExample

Format

A data frame with 10 columns:

chr chromosome

pos position

value value,such as p-value

des description

color color

r2value r2 value

link hyperlink for snp

index index for combination

image image for combination

html The external html language

wigExample	*Wig plot example data*

Description

The data is in matrix with column names

Usage

```
wigExample
```

Format

A data frame with 5 columns:

chr chromosome

pos position

des description

value value

html The external html language

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