

# Package ‘mammaPrintData’

June 27, 2024

**Type** Package

**Title** RGLists from the Glas and Buyse breast cancer studies

**Version** 1.40.0

**Date** 2013-05-13

**Description** Gene expression data for the two breast cancer cohorts published by Glas and Buyse in 2006. This cohorts were used to implement and validate the mammaPrint breast cancer test.

**biocViews** ExperimentData, ExpressionData, CancerData, BreastCancerData, MicroarrayData, TwoChannelData

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**Depends** R (>= 2.13.0)

**Suggests** Biobase, readxl, limma

**License** Artistic-2.0

**URL** <http://luigimarchionni.org/breastTSP.html>

**LazyLoad** yes

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mammaPrintData-package

*Gene expression, annotations and clinical information for the Glas and Buse cohorts*

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## Description

This package contains the two `RGList-class` instances corresponding to the breast cancer patients' cohorts published by Glas and colleagues in BMC Genomics (2006), and by Buyse and colleagues in JNCI (2006). Since in both studies a two-colors dye swap design was applied, this package contains two distinct `RGList-class` instances for each data set, one for each dye-swap set of hybridizations. This package contains unprocessed data, as obtained from the original raw data files available from the ArrayExpress repository.

## Usage

```
data(glasRG)
data(buyseRGa)
```

## Format

The `RGList-class` instances contained in this package (`glasRGcy5`, `glasRGcy5`, `buyseRGcy5`, and `buyseRGcy5`, accounts for 1900 microarray features and 162 and 307 samples respectively.

## Details

```
Package:  mammaPrintData
Type:     Package
Version:  0.99.5.
Date:     2013-03-25
License:  Artistic-2.0
```

## Author(s)

Luigi Marchionni <marchion@gmail.com>

## Source

<http://www.ncbi.nlm.nih.gov/pubmed/?term=17074082> <http://www.ncbi.nlm.nih.gov/pubmed/?term=16954471>

## References

Annuska M Glas et al., "Converting a breast cancer microarray signature into a high-throughput diagnostic test", *BMC Genomics*, 2006, **7**:278-288

Marc Buyse et al., "Validation and clinical utility of a 70-gene prognostic signature for women with node-negative breast cancer", *JNCI*, 2006, **98**(17):1183-1192

## See Also

See [RGList-class](#)

## Examples

```
### load limma package
library(limma)

### load the glasRG dataset: two different dye-swap sets:
###glasRGcy5: information provided for RNA labeled with Cy5
###glasRGcy3: information provided for RNA labeled with Cy3
data(glasRG)

### load the buyseRG dataset: two different dye-swap sets:
###buyseRGcy5: reference RNA was labeled with Cy5
###buyseRGcy3: reference RNA was labeled with Cy3
data(buyseRG)

### show the class of the glasRGcy3 dataset
class(glasRGcy3)

### show the class of the buyseRGcy3 dataset
class(buyseRGcy3)

### show the dimensions of the glasRGcy3 dataset
dim(glasRGcy3)

### show the dimensions of the buyseRGcy3 dataset
dim(buyseRGcy3)

### show the first 10 rows of the glasRGcy3 phenotype data
head(glasRGcy3$targets, n=10)

### show the first 10 rows of the buyseRGcy5 phenotype data
head(buyseRGcy5$targets, n=10)

### show the first 10 features of the glasRGcy5 phenotype data
head(glasRGcy5$genes, n=10)

### show the first 10 features of the buyseRGcy3 phenotype data
head(buyseRGcy3$genes, n=10)
```

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buyseRGcy3	<i>Gene expression, annotations and clinical information for the Buyse cohort: set of dye-swap hybridizations in which the reference RNA was labeled with Cy3</i>
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## Description

This package contains the `RGList-class` instance (see `limma`) for the gene expression data set published by Buyse and colleagues. This object contains the set of dye-swap hybridizations in which the reference RNA was labeled with Cy3.

## Usage

```
data(buyseRG)
```

## Format

The `buyseRGcy3 RGList-class` contains 1900 microarray features and 307 samples. The following components were included:

- `buyseRGcy3$targets`: a `data.frame` for the breast cancer patients clinical information;
- `buyseRGcy3$genes`: a `data.frame` containing the microarray annotations;
- `buyseRGcy3$R`: the raw median gene expression foreground intensities from the Red channel;
- `buyseRGcy3$Rb`: the raw median gene expression background intensities from the Red channel;
- `buyseRGcy3$G`: the raw median gene expression foreground intensities from the Green channel;
- `buyseRGcy3$Gb`: the raw median gene expression background intensities from the Green channel;
- `buyseRGcy3$logRatio`: the Log ratio between Red and Green channel, as available from the raw data files;
- `buyseRGcy3$logRatioError`: the Log ratio Error associated with the Log Ratio between Red and Green channel, as available from the raw data files;
- `buyseRGcy3$ID`: the microarray features identifiers, as available from the raw data files;

## Details

This dataset corresponds to the breast cancer patients' cohort published by Buyse and colleagues in JNCI (2006).

## Source

<http://www.ncbi.nlm.nih.gov/pubmed/?term=16954471>

## References

Marc Buyse et al., "Validation and clinical utility of a 70-gene prognostic signature for women with node-negative breast cancer", *JNCI*, 2006, **98**(17):1183-1192

## See Also

See [RGList-class](#)

## Examples

```
### load limma package
library(limma)

### load the buyseRGcy3 dataset: dye-swap set in which the reference
###RNA was labeled with Cy3 (from the Glas cohort)
data(buyseRG)

### show the class of the buyseRGcy3 dataset
class(buyseRGcy3)

### show the dimentions of the buyseRGcy3 dataset
dim(buyseRGcy3)

### show the first 10 rows of the buyseRGcy3 phenotype data
head(buyseRGcy3$targets, n=10)

### show the first 10 features of the buyseRGcy3 phenotype data
head(buyseRGcy3$genes, n=10)
```

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buyseRGcy5

*Gene expression, annotations and clinical information for the Buyse cohort: set of dye-swap hybridizations in which the reference RNA was labeled with Cy5*

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## Description

This package contains the `RGList-class` instance (see `limma`) for the gene expression data set published by Buyse and colleagues. This object contains the set of dye-swap hybridizations in which the reference RNA was labeled with Cy5.

## Usage

```
data(buyseRG)
```

## Format

The `buyseRGcy5` `RList-class` contains 1900 microarray features and 307 samples. The following components were included:

- `buyseRGcy5$targets`: a `data.frame` for the breast cancer patients clinical information;
- `buyseRGcy5$genes`: a `data.frame` containing the microarray annotations;
- `buyseRGcy5$R`: the raw median gene expression foreground intensities from the Red channel;
- `buyseRGcy5$Rb`: the raw median gene expression background intensities from the Red channel;
- `buyseRGcy5$G`: the raw median gene expression foreground intensities from the Green channel;
- `buyseRGcy5$Gb`: the raw median gene expression background intensities from the Green channel;
- `buyseRGcy5$logRatio`: the Log ratio between Red and Green channel, as available from the raw data files;
- `buyseRGcy5$logRatioError`: the Log ratio Error associated with the Log Ratio between Red and Green channel, as available from the raw data files;
- `buyseRGcy5$ID`: the microarray features identifiers, as available from the raw data files;

## Details

This dataset corresponds to the breast cancer patients' cohort published by Buyse and colleagues in *JNCI* (2006).

## Source

<http://www.ncbi.nlm.nih.gov/pubmed/?term=16954471>

## References

Marc Buyse et al., "Validation and clinical utility of a 70-gene prognostic signature for women with node-negative breast cancer", *JNCI*, 2006, **98**(17):1183-1192

## See Also

See [RList-class](#)

## Examples

```
### load limma package
library(limma)

### load the buyseRGcy5 dataset: dye-swap set in which the reference
###RNA was labeled with Cy3 (from the Glas cohort)
data(buyseRG)

### show the class of the buyseRGcy5 dataset
class(buyseRGcy5)
```

```
### show the dimensions of the buyseRGcy5 dataset
dim(buyseRGcy5)

### show the first 10 rows of the buyseRGcy5 phenotype data
head(buyseRGcy5$targets, n=10)

### show the first 10 features of the buyseRGcy5 phenotype data
head(buyseRGcy5$genes, n=10)
```

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glasRGcy3	<i>Gene expression, annotations and clinical information for the Glas cohort: set of dye-swap hybridizations in which the information was associated with RNA samples labeled with Cy3</i>
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## Description

This package contains the `RGList`-class instance (see `limma`) for the gene expression data set published by Glas and colleagues. This object contains the set of dye-swap hybridizations in which the information provided in the `ArrayExpress` SDRF table was associated with the RNA samples labeled with Cy3.

## Usage

```
data(glasRG)
```

## Format

The `glasRGcy3` `RGList`-class contains 1900 microarray features and 307 samples. The following components were included:

- `glasRGcy3$targets`: a `data.frame` for the breast cancer patients clinical information;
- `glasRGcy3$genes`: a `data.frame` containing the microarray annotations;
- `glasRGcy3$R`: the raw median gene expression foreground intensities from the Red channel;
- `glasRGcy3$Rb`: the raw median gene expression background intensities from the Red channel;
- `glasRGcy3$G`: the raw median gene expression foreground intensities from the Green channel;
- `glasRGcy3$Gb`: the raw median gene expression background intensities from the Green channel;
- `glasRGcy3$logRatio`: the Log ratio between Red and Green channel, as available from the raw data files;
- `glasRGcy3$logRatioError`: the Log ratio Error associated with the Log Ratio between Red and Green channel, as available from the raw data files;
- `glasRGcy3$ID`: the microarray features identifiers, as available from the raw data files;

**Details**

This dataset corresponds to the breast cancer patients' cohort published by Glas and colleagues in BMC Genomics (2006).

**Source**

<http://www.ncbi.nlm.nih.gov/pubmed/?term=17074082>

**References**

Annuska M Glas et al., "Converting a breast cancer microarray signature into a high-throughput diagnostic test", *BMC Genomics*, 2006, 7:278-288

**See Also**

See [RGList-class](#)

**Examples**

```
### load limma package
library(limma)

### load the glasRGcy3 dataset: dye-swap set in which the information provided
###inthe SDRF table was associated with the samples labeled with Cy3
data(glasRG)

### show the class of the glasRGcy3 dataset
class(glasRGcy3)

### show the dimentions of the glasRGcy3 dataset
dim(glasRGcy3)

### show the first 10 rows of the glasRGcy3 phenotype data
head(glasRGcy3$targets, n=10)

### show the first 10 features of the glasRGcy3 phenotype data
head(glasRGcy3$genes, n=10)
```

---

glasRGcy5

*Gene expression, annotations and clinical information for the Glas cohort: set of dye-swap hybridizations in which the information was associated with RNA samples labeled with Cy5*

---

**Description**

This package contains the RGList-class instance (see limma) for the gene expression data set published by Glas and colleagues. This object contains the set of dye-swap hybridizations in which the information provided in the ArrayExpress SDRF table was associated with the RNA samples labeled with Cy5.



**Usage**

```
data(glasRG)
```

**Format**

The `glasRGcy5` `RGList`-class contains 1900 microarray features and 307 samples. The following components were included:

- `glasRGcy5$targets`: a `data.frame` for the breast cancer patients clinical information;
- `glasRGcy5$genes`: a `data.frame` containing the microarray annotations;
- `glasRGcy5$R`: the raw median gene expression foreground intensities from the Red channel;
- `glasRGcy5$Rb`: the raw median gene expression background intensities from the Red channel;
- `glasRGcy5$G`: the raw median gene expression foreground intensities from the Green channel;
- `glasRGcy5$Gb`: the raw median gene expression background intensities from the Green channel;
- `glasRGcy5$logRatio`: the Log ratio between Red and Green channel, as available from the raw data files;
- `glasRGcy5$logRatioError`: the Log ratio Error associated with the Log Ratio between Red and Green channel, as available from the raw data files;
- `glasRGcy5$ID`: the microarray features identifiers, as available from the raw data files;

**Details**

This dataset corresponds to the breast cancer patients' cohort published by Glas and colleagues in *BMC Genomics* (2006).

**Source**

<http://www.ncbi.nlm.nih.gov/pubmed/?term=17074082>

**References**

Annuska M Glas et al., "Converting a breast cancer microarray signature into a high-throughput diagnostic test", *BMC Genomics*, 2006, 7:278-288

**See Also**

See [RGList-class](#)

**Examples**

```
### load limma package
library(limma)

### load the glasRGcy3 dataset: dye-swap set in which the information provided
###inthe SDRF table was associated with the samples labeled with Cy5
data(glasRG)
```

```
### show the class of the glasRGcy5 dataset
class(glasRGcy5)

### show the dimensions of the glasRGcy5 dataset
dim(glasRGcy5)

### show the first 10 rows of the glasRGcy5 phenotype data
head(glasRGcy5$targets, n=10)

### show the first 10 features of the glasRGcy5 phenotype data
head(glasRGcy5$genes, n=10)
```

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