

Package ‘msBreast’

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Type Package

Title Protein Mass Spectra Dataset from a Breast Cancer Study

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Depends R (>= 2.12.0)

DependsPlus RSQLite (>= 0.5-6)

Suggests msProcess

Description This package provides a dataset of 96 protein mass spectra generated from a pooled sample of nipple aspirate fluid (NAF) from healthy breasts and breasts with cancer.

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URL <http://www.insightful.com/services/research/teome/default.asp>

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Breast2003QC

Mass Spectra from a Breast Cancer Quality Control Sample

Description

A data object of class `msSet`, consisting of 96 mass spectra generated from a pooled sample of nipple aspirate fluid (NAF) from healthy breasts and breasts with cancer. The data set was derived from `Breast2003QCList` by eliminating the mass region below 950 Da/charge. Please see the references for more details.

Usage

```
Breast2003QC
```

Format

An object of `msSet`. See `msSet` in package `msProcess` for details.

Source

<http://bioinformatics.mdanderson.org/pubdata.html>

References

Coombes, K.R., Tsavachidis, S., Morris, J.S., Baggerly, K.A., and Kuerer, H.M., "Improved peak detection and quantification of mass spectrometry data acquired from surface-enhanced laser desorption and ionization by denoising spectra with the undecimated discrete wavelet transform," *Proteomics*, 5:4107–17, 2005.

Pawlik, T.M., Fritsche, H., Coombes, K.R., Xiao, L., Krishnamurthy, S., Hunt, K.K., Pusztai, L., Chen, J.N., Clarke, C.H., Arun, B., Hung, M.C., and Kuerer, H.M., "Significant differences in nipple aspirate fluid protein expression between healthy women and those with breast cancer demonstrated by time-of-flight mass spectrometry," *Breast Cancer Research and Treatment*, 89(2):149–57, 2005.

Kuerer, H.M., Coombes, K.R., Chen, J.N., Xiao, L., Clarke, C., Fritsche, H., Krishnamurthy, S., Marcy, S., Hung, M.C., and Hunt, K.K., "Association between ductal fluid proteomic expression profiles and the presence of lymph node metastases in women with breast cancer," *Surgery*, 136(5):1061–9, 2004.

Coombes, K.R., Fritsche, Jr., H.A., Clarke, C., Chen, J.N., Baggerly, K.A., Morris, J.S., Xiao, L.C., Hung, M.C., and Kuerer, H.M., "Quality control and peak finding for proteomics data collected from nipple aspirate fluid by surface-enhanced laser desorption and ionization," *Clinical Chemistry*, 49(10):1615–23, 2003.

See Also

[Breast2003QCList](#).

Examples

```
if (require("msProcess")) {  
  if (!exists("Breast2003QC")) data("Breast2003QC", package="msBreast")  
  
  ## plot a few spectra  
  plot(Breast2003QC, subset=1:5)  
  
  ## image of all spectra  
  image(Breast2003QC)  
}
```

Breast2003QCList	<i>Mass Spectra from a Breast Cancer Quality Control Sample</i>
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Description

A data object of class `msList`, consisting of 96 mass spectra generated from a pooled sample of nipple aspirate fluid (NAF) from healthy breasts and breasts with cancer. (see references for details).

Usage

```
Breast2003QCList
```

Format

An object of `msList`. See `msList` in package `msProcess` for details.

Source

<http://bioinformatics.mdanderson.org/pubdata.html>

References

- Coombes, K.R., Tsavachidis, S., Morris, J.S., Baggerly, K.A., and Kuerer, H.M., "Improved peak detection and quantification of mass spectrometry data acquired from surface-enhanced laser desorption and ionization by denoising spectra with the undecimated discrete wavelet transform," *Proteomics*, 5:4107–17, 2005.
- Pawlik, T.M., Fritsche, H., Coombes, K.R., Xiao, L., Krishnamurthy, S., Hunt, K.K., Pusztai, L., Chen, J.N., Clarke, C.H., Arun, B., Hung, M.C., and Kuerer, H.M., "Significant differences in nipple aspirate fluid protein expression between healthy women and those with breast cancer demonstrated by time-of-flight mass spectrometry," *Breast Cancer Research and Treatment*, 89(2):149–57, 2005.
- Kuerer, H.M., Coombes, K.R., Chen, J.N., Xiao, L., Clarke, C., Fritsche, H., Krishnamurthy, S., Marcy, S., Hung, M.C., and Hunt, K.K., "Association between ductal fluid proteomic expression profiles and the presence of lymph node metastases in women with breast cancer," *Surgery*, 136(5):1061–9, 2004.
- Coombes, K.R., Fritsche, Jr., H.A., Clarke, C., Chen, J.N., Baggerly, K.A., Morris, J.S., Xiao, L.C., Hung, M.C., and Kuerer, H.M., "Quality control and peak finding for proteomics data collected from nipple aspirate fluid by surface-enhanced laser desorption and ionization," *Clinical Chemistry*, 49(10):1615–23, 2003.

See Also

[Breast2003QC](#).

Examples

```
if (require("msProcess")) {  
  if (!exists("Breast2003QCList")) data("Breast2003QCList", package="msBreast")  
  
  ## print an msList object  
  Breast2003QCList  
  
  ## print the synopsis of an msList object  
  summary(Breast2003QCList)  
  
  ## plot the 10th spectrum from an msList object  
  plot(Breast2003QCList, index=10)  
}
```

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