Cancer

Lieven Clement

statOmics, Ghent University (https://statomics.github.io)

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This is part of the online course Proteomics Data Analysis (PDA)

1 Background

Eighteen Estrogen Receptor Positive Breast cancer tissues from from patients treated with tamoxifen upon recurrence have been assessed in a proteomics study. Nine patients had a good outcome (OR) and the other nine had a poor outcome (PD). The proteomes have been assessed using an LTQ-Orbitrap and the thermo output .RAW files were searched with MaxQuant (version 1.4.1.2) against the human proteome database (FASTA version 2012-09, human canonical proteome).

2 Data

We first import the data from peptide.txt file. This is the file containing your peptide-level intensities. For a MaxQuant search [6], this peptide.txt file can be found by default in the "path_to_raw_files/combined/txt/" folder from the MaxQuant output, with "path_to_raw_files" the folder where the raw files were saved.

We generate the object peptideFile with the path to the peptide.txt file. Using the grepEcols function, we find the columns that contain the expression data of the peptide in the peptide.txt file.

```
library(tidyverse)
library(limma)
library(QFeatures)
library(msqrob2)
library(plotly)

peptidesFile <- "https://raw.githubusercontent.com/statOmics/PDA22GTPB/data/quantification/cancer/peptid

ecols <- grep(
  "Intensity\\.",
  names(read.delim(peptidesFile))
  )
```

Next, we read the data and store it in QFeatures object

```
pe <- readQFeatures(
  table = peptidesFile,
  fnames = 1,
  ecol = ecols,
  name = "peptideRaw", sep="\t")
```

The QFeatures object pe currently contains a single assay, named peptideRaw.

We extract the column names from the peptideRaw assay and see that this contains information about the prognosis.

```
colnames(pe[["peptideRaw"]])
```

```
##  [1] "Intensity.OR.01" "Intensity.OR.04" "Intensity.OR.07" "Intensity.OR.09"
##  [5] "Intensity.OR.10" "Intensity.OR.13" "Intensity.OR.20" "Intensity.OR.23"
##  [9] "Intensity.OR.25" "Intensity.PD.02" "Intensity.PD.03" "Intensity.PD.04"
## [13] "Intensity.PD.06" "Intensity.PD.07" "Intensity.PD.08" "Intensity.PD.09"
## [17] "Intensity.PD.10" "Intensity.PD.11"
```

We rename the colnames by dropping the "Intensity." from the name.

```
(newNames <-  sub(
  pattern = "Intensity\\.",
  replacement = "",
  colnames(pe[["peptideRaw"]]))
 )
```

```
##  [1] "OR.01" "OR.04" "OR.07" "OR.09" "OR.10" "OR.13" "OR.20" "OR.23" "OR.25"
## [10] "PD.02" "PD.03" "PD.04" "PD.06" "PD.07" "PD.08" "PD.09" "PD.10" "PD.11"
```

```
pe <- renameColname(pe,
                    i = "peptideRaw",
                    newNames)
pe <- renamePrimary(pe, newNames)
colnames(pe[["peptideRaw"]])
```

```
##  [1] "OR.01" "OR.04" "OR.07" "OR.09" "OR.10" "OR.13" "OR.20" "OR.23" "OR.25"
## [10] "PD.02" "PD.03" "PD.04" "PD.06" "PD.07" "PD.08" "PD.09" "PD.10" "PD.11"
```

In the following code chunk, we add the prognosis of the patients that we can read in the raw file name to the colData.

```
colData(pe)$prognosis <-
  colnames(pe[["peptideRaw"]]) %>%
  substr(start = 1, stop = 2) %>%
  as.factor
colData(pe)$prognosis
```

```
##  [1] OR OR OR OR OR OR OR OR OR PD PD PD PD PD PD PD PD PD
## Levels: OR PD
```

We calculate how many non zero intensities we have per peptide and this will be useful for filtering.

```
rowData(pe[["peptideRaw"]])$nNonZero <- rowSums(assay(pe[["peptideRaw"]]) > 0)
```

Peptides with zero intensities are missing peptides and should be represent with a `NA` value rather than `0`.

```
pe <- zeroIsNA(pe, "peptideRaw") # convert 0 to NA
```

Look at the column names of the data to know the variables that you can use for filtering.

```
pe[["peptideRaw"]] %>% rowData %>% names
```

```
##  [1] "Sequence"              "Proteins"              "Leading.razor.protein"
##  [4] "Gene.names"            "Protein.names"         "Unique..Groups."
##  [7] "Unique..Proteins."     "Charges"               "PEP"
## [10] "Score"                 "Slice.Average"         "Slice.Std..Dev."
## [13] "Slice.1"               "Unique.Slice.Average"  "Unique.Slice.Std..Dev."
## [16] "Unique.Slice.1"        "Experiment.OR.01"      "Experiment.OR.04"
## [19] "Experiment.OR.07"      "Experiment.OR.09"      "Experiment.OR.10"
## [22] "Experiment.OR.13"      "Experiment.OR.20"      "Experiment.OR.23"
## [25] "Experiment.OR.25"      "Experiment.PD.02"      "Experiment.PD.03"
## [28] "Experiment.PD.04"      "Experiment.PD.06"      "Experiment.PD.07"
## [31] "Experiment.PD.08"      "Experiment.PD.09"      "Experiment.PD.10"
## [34] "Experiment.PD.11"      "Intensity"             "Reverse"
## [37] "Contaminant"           "id"                    "Protein.group.IDs"
## [40] "Mod..peptide.IDs"      "Evidence.IDs"          "MS.MS.IDs"
## [43] "Best.MS.MS"            "Oxidation..M..site.IDs" "nNonZero"
```

So we will filter on the “Reverse”, “Contaminant” and “nNonZero” column.

2.1 Data exploration

47% of all peptide intensities are missing and for some peptides we do not even measure a signal in any sample.

3 Preprocessing

This section preforms preprocessing for the peptide data. This include

- log transformation,
- filtering and
- summarisation of the data.

3.1 Log transform the data

```
pe <- logTransform(pe, base = 2, i = "peptideRaw", name = "peptideLog")
```

3.2 Filtering

1. Handling overlapping protein groups

In our approach a peptide can map to multiple proteins, as long as there is none of these proteins present in a smaller subgroup.

```
pe <- filterFeatures(pe, ~ Proteins %in% smallestUniqueGroups(rowData(pe[["peptideLog"]])$Proteins))
```

2. Remove reverse sequences (decoys) and contaminants

We now remove the contaminants and peptides that map to decoy sequences.

```
pe <- filterFeatures(pe,~Reverse != "+")
pe <- filterFeatures(pe,~ Contaminant != "+")
```

3. Drop peptides that were only identified in one sample

We keep peptides that were observed at last twice.

```
pe <- filterFeatures(pe,~ nNonZero >=2)
nrow(pe[["peptideLog"]])
```

```
## [1] 26696
```

We keep 26696 peptides upon filtering.

3.3 Normalize the data using median centering

We normalize the data by substracting the sample median from every intensity for peptide p in a sample i:

$$y_{ip}^{\text{norm}} = y_{ip} - \hat{\mu}_i$$

with $\hat{\mu}_i$ the median intensity over all observed peptides in sample i.

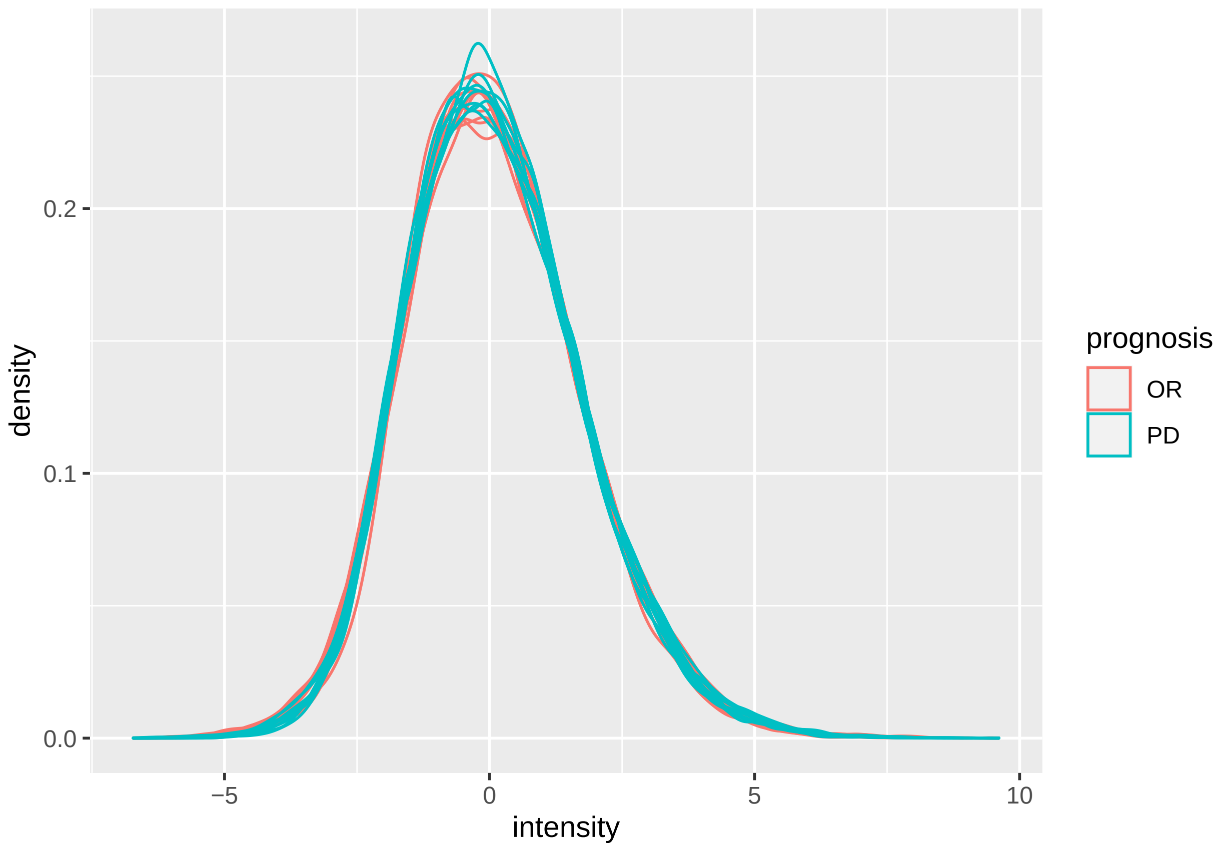
```
pe <- normalize(pe,
                i = "peptideLog",
                name = "peptideNorm",
                method = "center.median")
```

3.4 Explore normalized data

Upon the normalisation the density curves are nicely registered

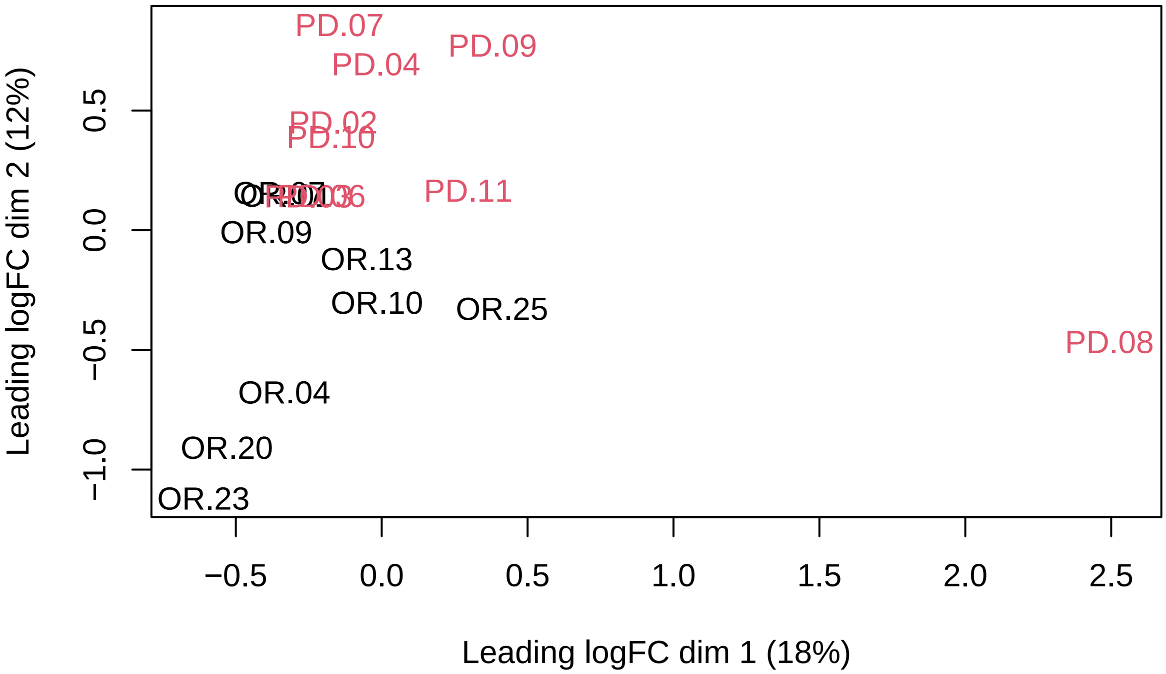
```
pe[["peptideNorm"]] %>%
  assay %>%
  as.data.frame() %>%
  gather(sample, intensity) %>%
  mutate(prognosis = colData(pe)[sample,"prognosis"]) %>%
  ggplot(aes(x = intensity,group = sample,color = prognosis)) +
    geom_density()
```

```
## Warning: Removed 188395 rows containing non-finite values (stat_density).
```



We can visualize our data using a Multi Dimensional Scaling plot, eg. as provided by the `limma` package.

```
pe[["peptideNorm"]] %>%
  assay %>%
  limma::plotMDS(col = as.numeric(colData(pe)$prognosis))
```



The first axis in the plot is showing the leading log fold changes (differences on the log scale) between the samples. We observe one outlying sample. In the second dimension we observe a separation according to prognosis.

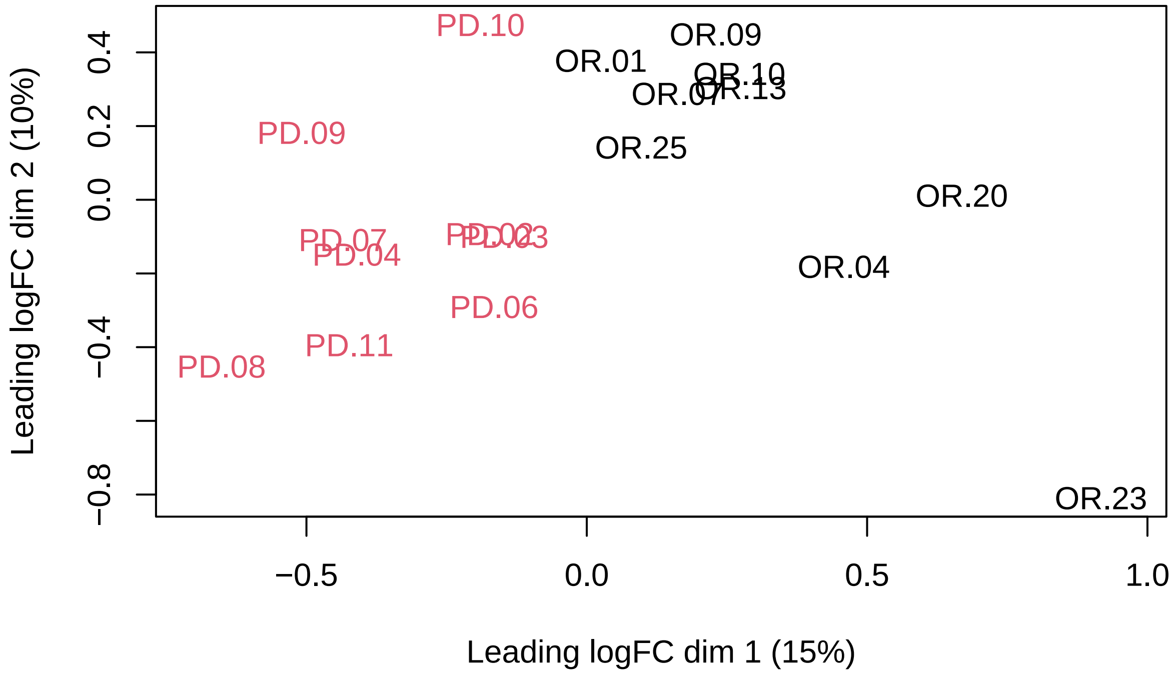
3.5 Summarization to protein level

- By default robust summarization is used: `fun = MsCoreUtils::robustSummary()`

```
pe <- aggregateFeatures(pe,
  i = "peptideNorm",
  fcol = "Proteins",
  na.rm = TRUE,
  name = "protein")
```

```
## Your quantitative and row data contain missing values. Please read the
## relevant section(s) in the aggregateFeatures manual page regarding the
## effects of missing values on data aggregation.
```

```
plotMDS(assay(pe[["protein"]]), col = as.numeric(colData(pe)$prognosis))
```



Note that the samples upon robust summarisation show a separation according to the prognosis.

4 Data Analysis

4.1 Estimation

We model the protein level expression values using `msqrob`. By default `msqrob2` estimates the model parameters using robust regression.

We will model the data with a different group mean. The group is incoded in the variable `prognosis` of the colData. We can specify this model by using a formula with the factor condition as its predictor: `formula = ~prognosis`.

Note, that a formula always starts with a symbol '~'.

```
pe <- msqrob(object = pe, i = "protein", formula = ~prognosis)
```

4.2 Inference

First, we extract the parameter names of the model by looking at the first model. The models are stored in the row data of the assay under the default name msqrobModels.

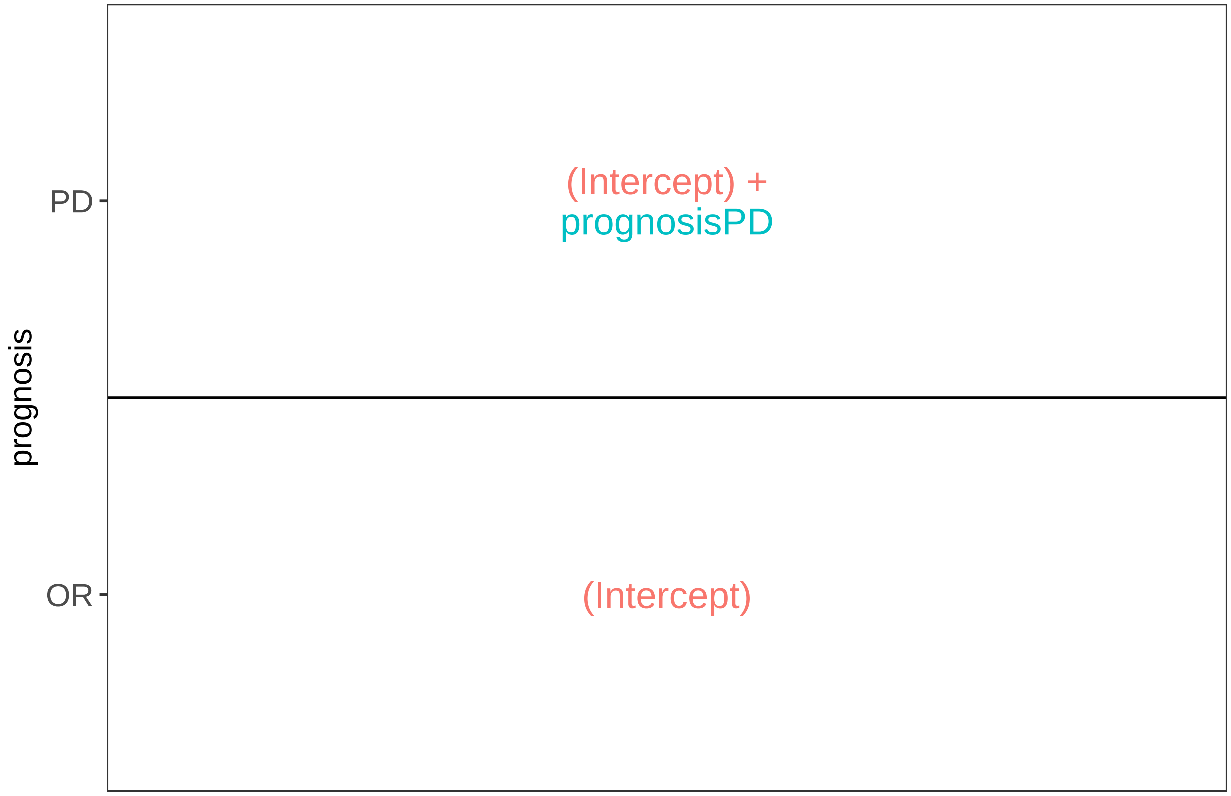
```
getCoef(rowData(pe[["protein"]])$msqrobModels[[1]])
```

```
## (Intercept) prognosisPD
##  -1.1185468   0.4007461
```

We can also explore the design of the model that we specified using the the package `ExploreModelMatrix`

```
library(ExploreModelMatrix)
VisualizeDesign(colData(pe),~prognosis)$plotlist
```

```
## [[1]]
```



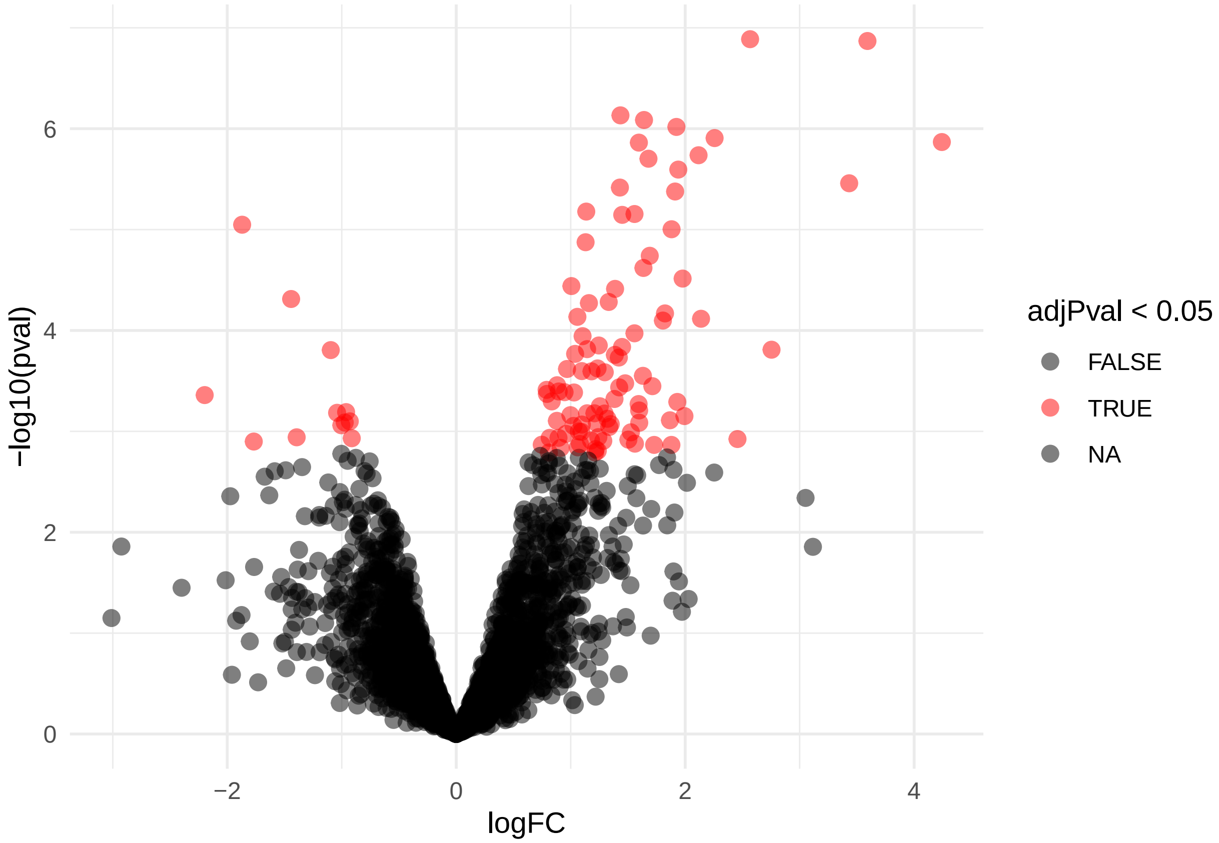
Spike-in condition `A` is the reference class. So the mean log2 expression for samples from good prognosis (OR) is '(Intercept). The mean log2 expression for samples from poor prognosis (PD) is'(Intercept)+prognosisPD'. Hence, the average log2 fold change between prognosis PD and prognosis OR is modelled using the parameter 'conditionPD'. Thus, we assess the contrast 'conditionPD = 0' with our statistical test.

```
L <- makeContrast("prognosisPD=0", parameterNames = c("prognosisPD"))
pe <- hypothesisTest(object = pe, i = "protein", contrast = L)
```

4.3 Plots

4.3.1 Volcano-plot

```r
volcano <- ggplot(rowData(pe[["protein"]])$prognosisPD,
                  aes(x = logFC, y = -log10(pval), color = adjPval < 0.05)) +
  geom_point(cex = 2.5) +
  scale_color_manual(values = alpha(c("black", "red"), 0.5)) + theme_minimal()
volcano
```

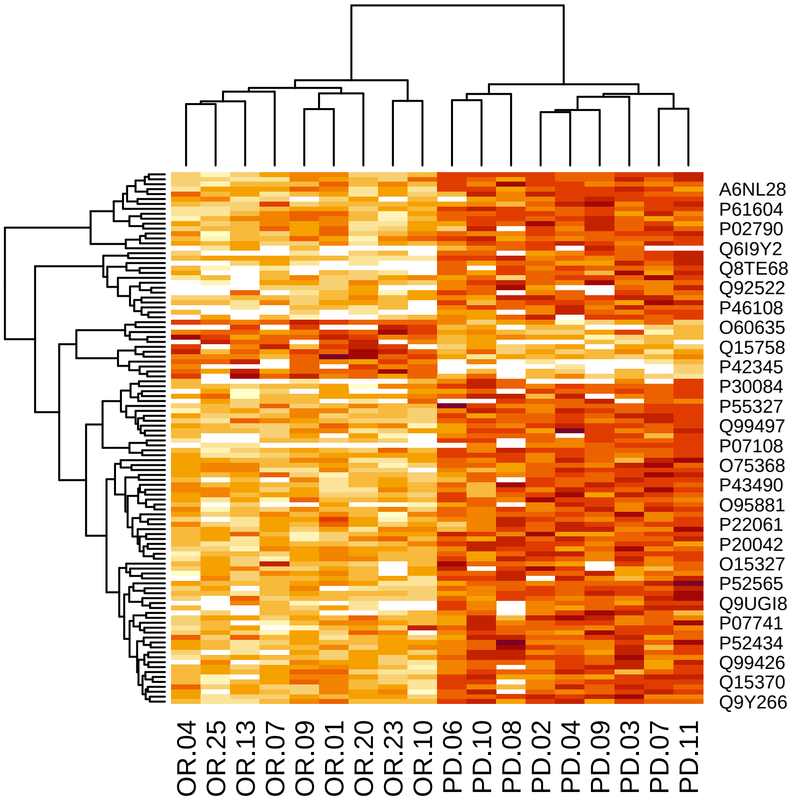


Note, that 108 proteins are found to be differentially abundant.

4.3.2 Heatmap

Note, that we also order the sigNames according to statistical significance.

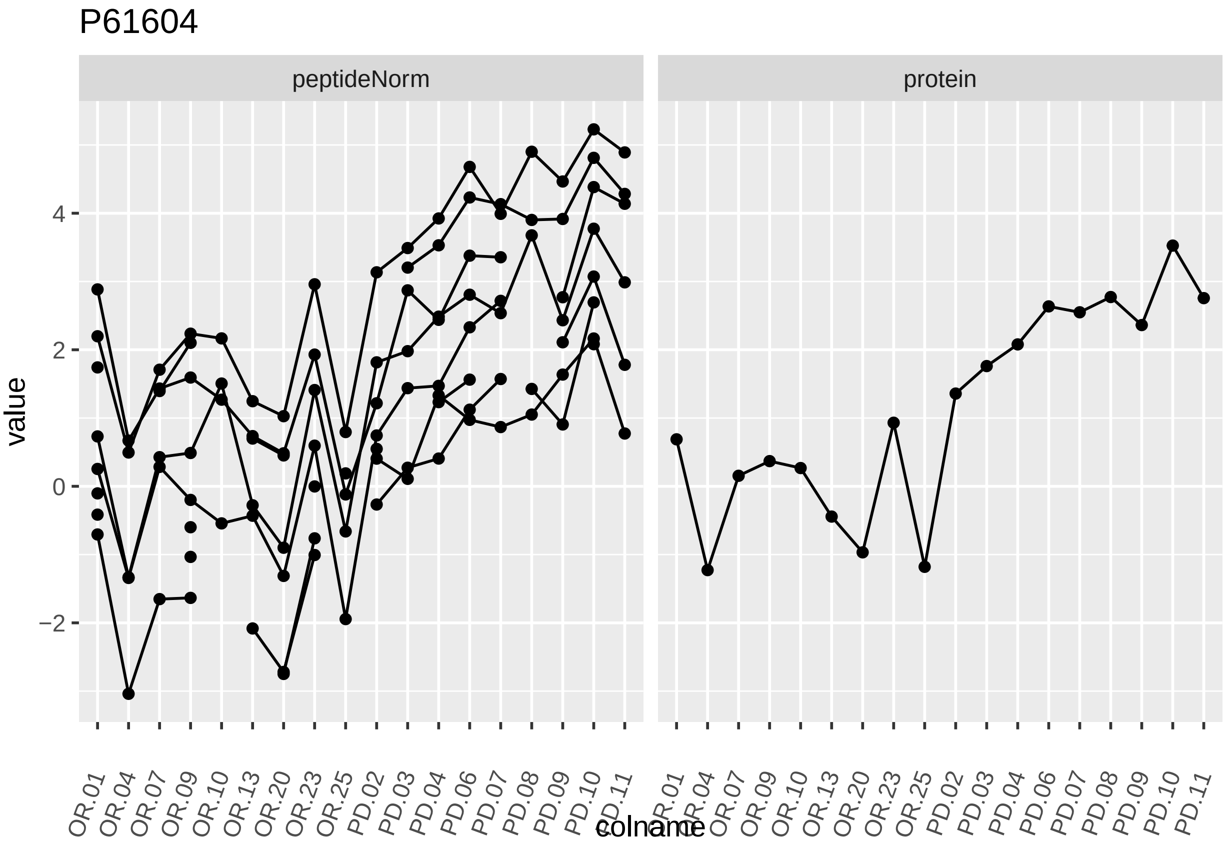
```r
sigNames <- rowData(pe[["protein"]])$prognosisPD %>%
  rownames_to_column("protein") %>%
  arrange(pval) %>%
  filter(adjPval<0.05) %>%
  pull(protein)
heatmap(assay(pe[["protein"]])[sigNames, ])
```

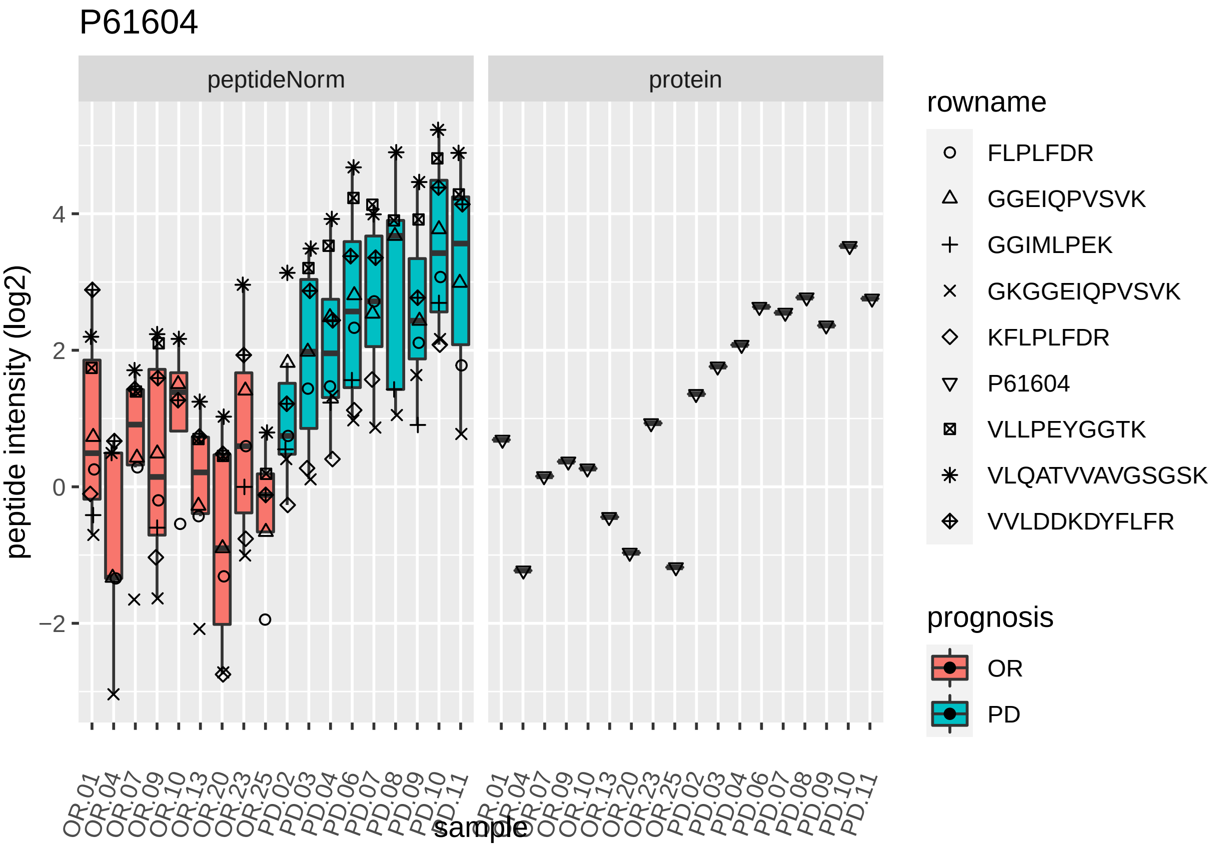


4.3.3 Detail plots

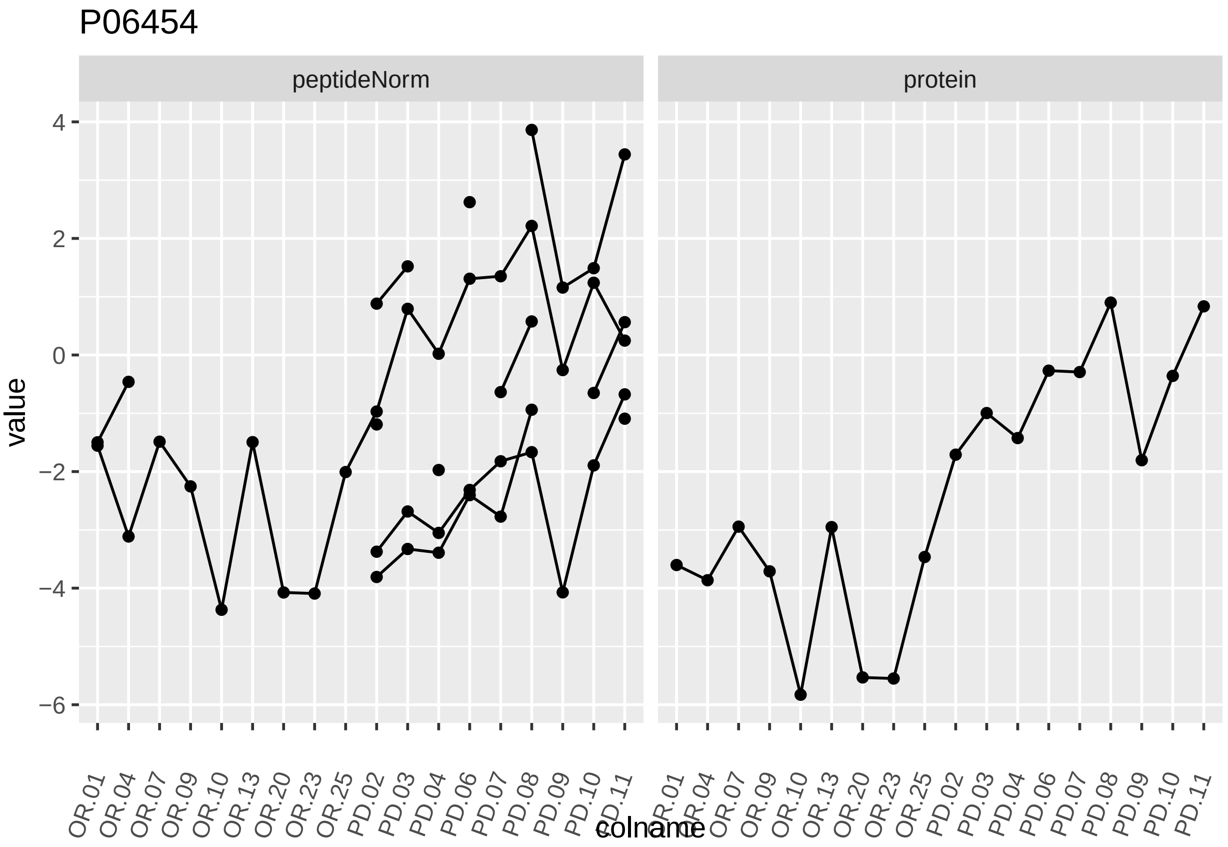
We make detail plots for the top 10 proteins to restrict the number of detail plots.

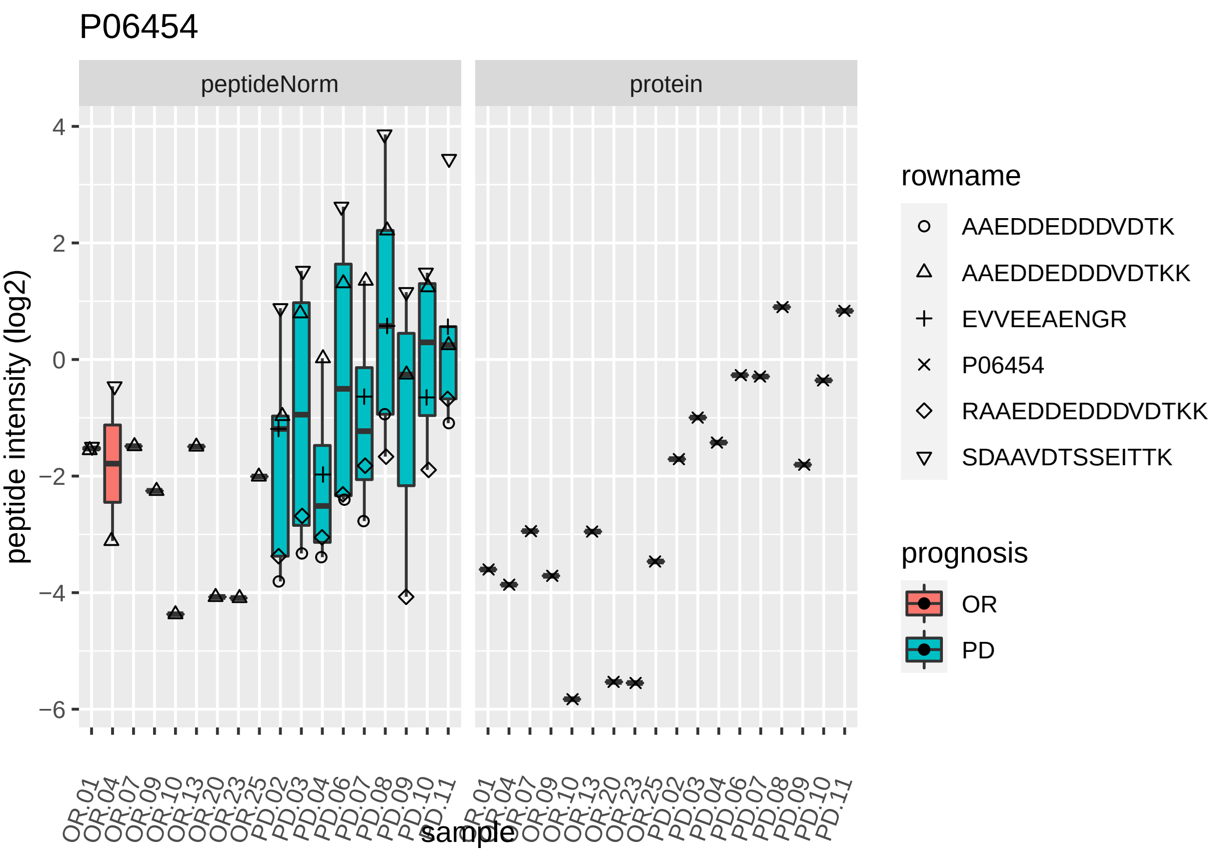
```
for (protName in sigNames)
#for (protName in orderProt[1:10])
{
pePlot <- pe[protName, , c("peptideNorm","protein")]
pePlotDf <- data.frame(longFormat(pePlot))
pePlotDf$assay <- factor(pePlotDf$assay,
                        levels = c("peptideNorm", "protein"))
pePlotDf$prognosis <- as.factor(colData(pePlot)[pePlotDf$colname, "prognosis"])

# plotting
p1 <- ggplot(data = pePlotDf,
       aes(x = colname, y = value, group = rowname)) +
    geom_line() +
    geom_point() +
    theme(axis.text.x = element_text(angle = 70, hjust = 1, vjust = 0.5)) +
    facet_grid(~assay) +
    ggtitle(protName)
print(p1)

# plotting 2
p2 <- ggplot(pePlotDf, aes(x = colname, y = value, fill = prognosis)) +
  geom_boxplot(outlier.shape = NA) +
  geom_point(
    position = position_jitter(width = .1),
    aes(shape = rowname)) +
  scale_shape_manual(values = 1:nrow(pePlotDf)) +
  labs(title = protName, x = "sample", y = "peptide intensity (log2)") +
  theme(axis.text.x = element_text(angle = 70, hjust = 1, vjust = 0.5)) +
  facet_grid(~assay)
print(p2)
}
```

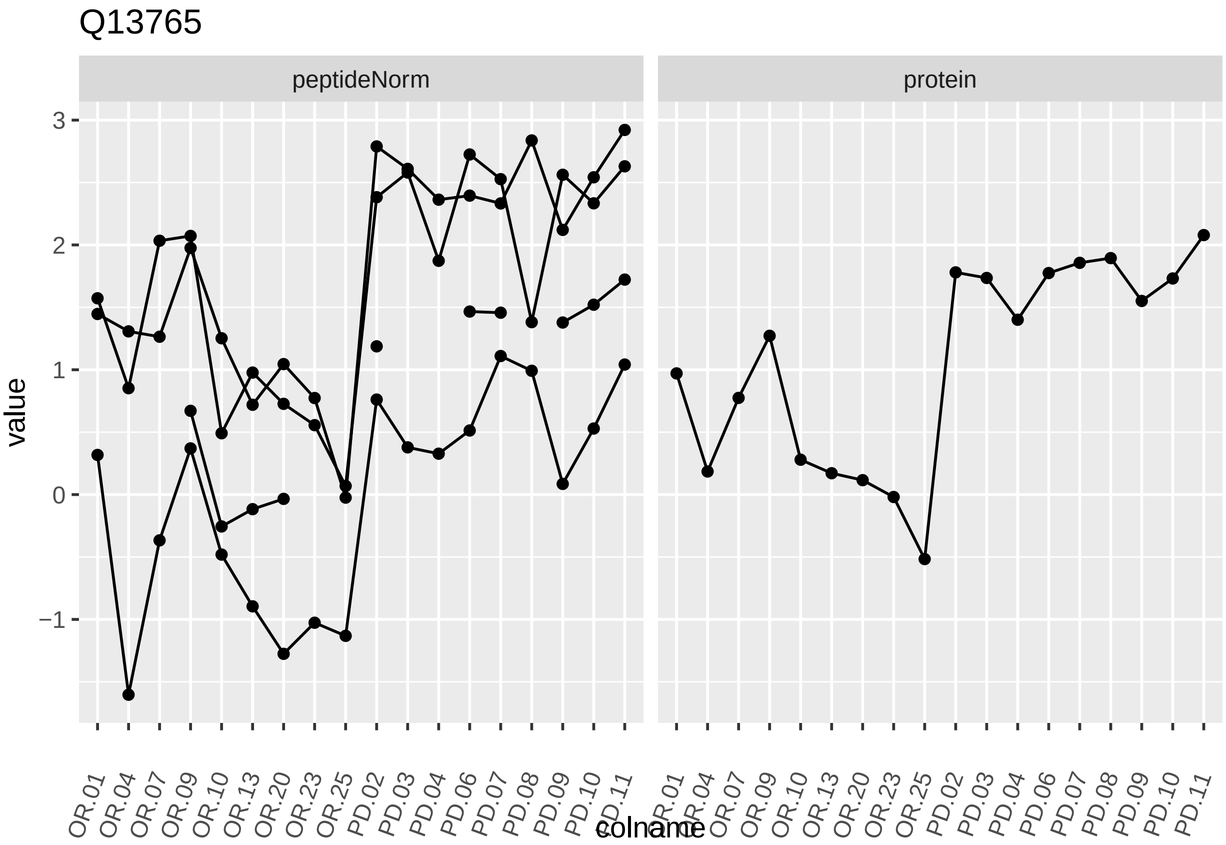




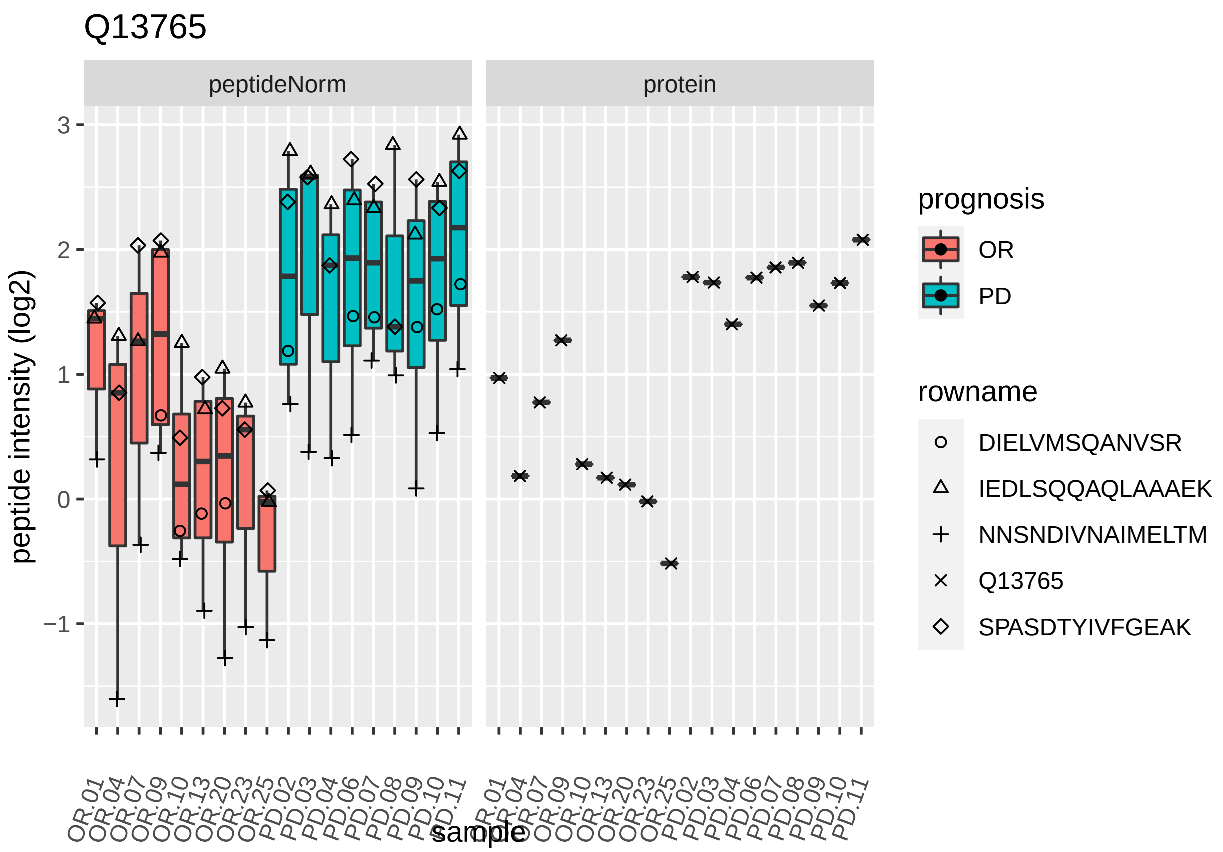
P61604
peptideNorm
protein
peptide intensity (log2)
4
2
0
−2
sample
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
rowname
○ FLPLFDR
△ GGEIQPVSVK
+ GGIMLPEK
× GKGGEIQPVSVK
◇ KFLPLFDR
▽ P61604
⊠ VLLPEYGGTK
✳ VLQATVVAVGSGSK
◈ VVLDDKDYFLFR
prognosis
🟥 OR
🟦 PD

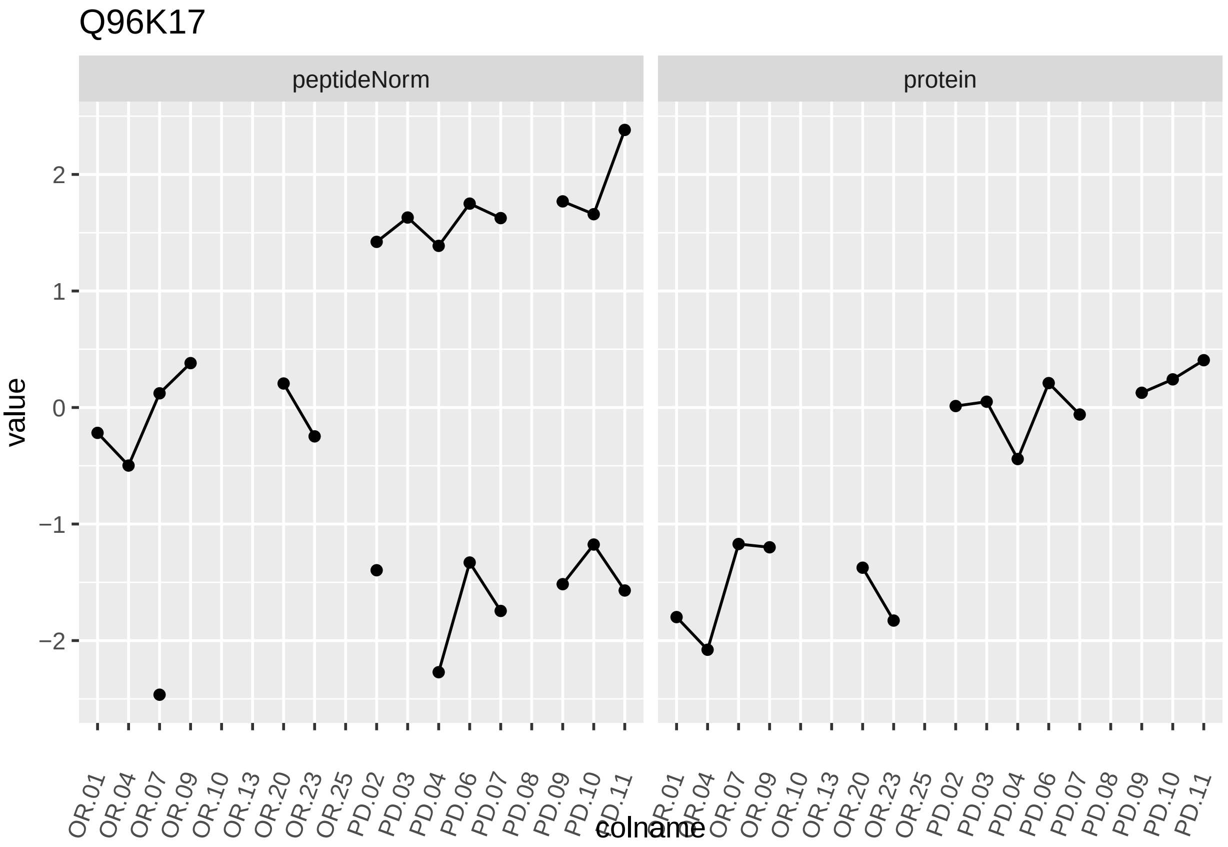

P06454
peptideNorm
protein
value
4
2
0
−2
−4
−6
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

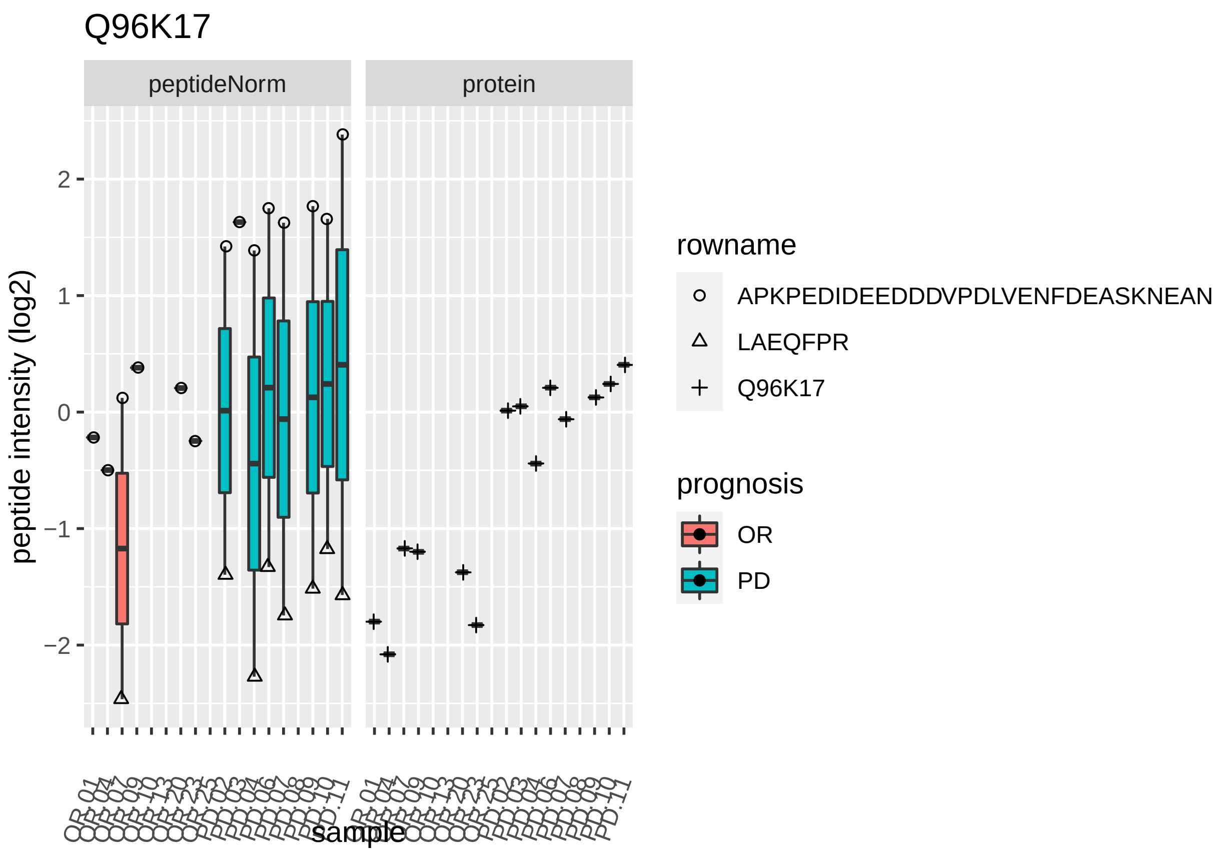

P06454
peptideNorm
protein
peptide intensity (log2)
4
2
0
−2
−4
−6
sample
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
rowname
○ AAEDDEDDDVDTK
△ AAEDDEDDDVDTKK
+ EVVEEAENGR
× P06454
◇ RAAEDDEDDDVDTKK
▽ SDAAVDTSSEITTK
prognosis
OR
PD

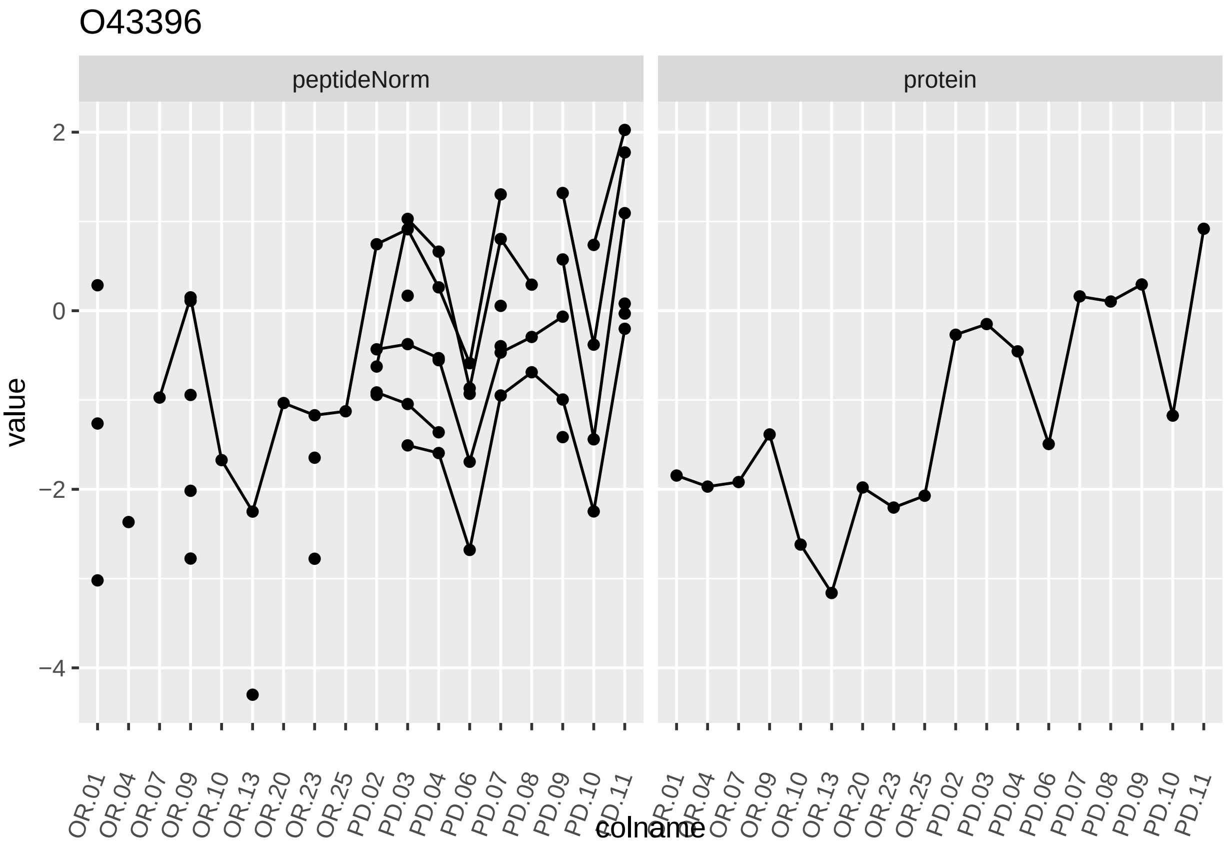


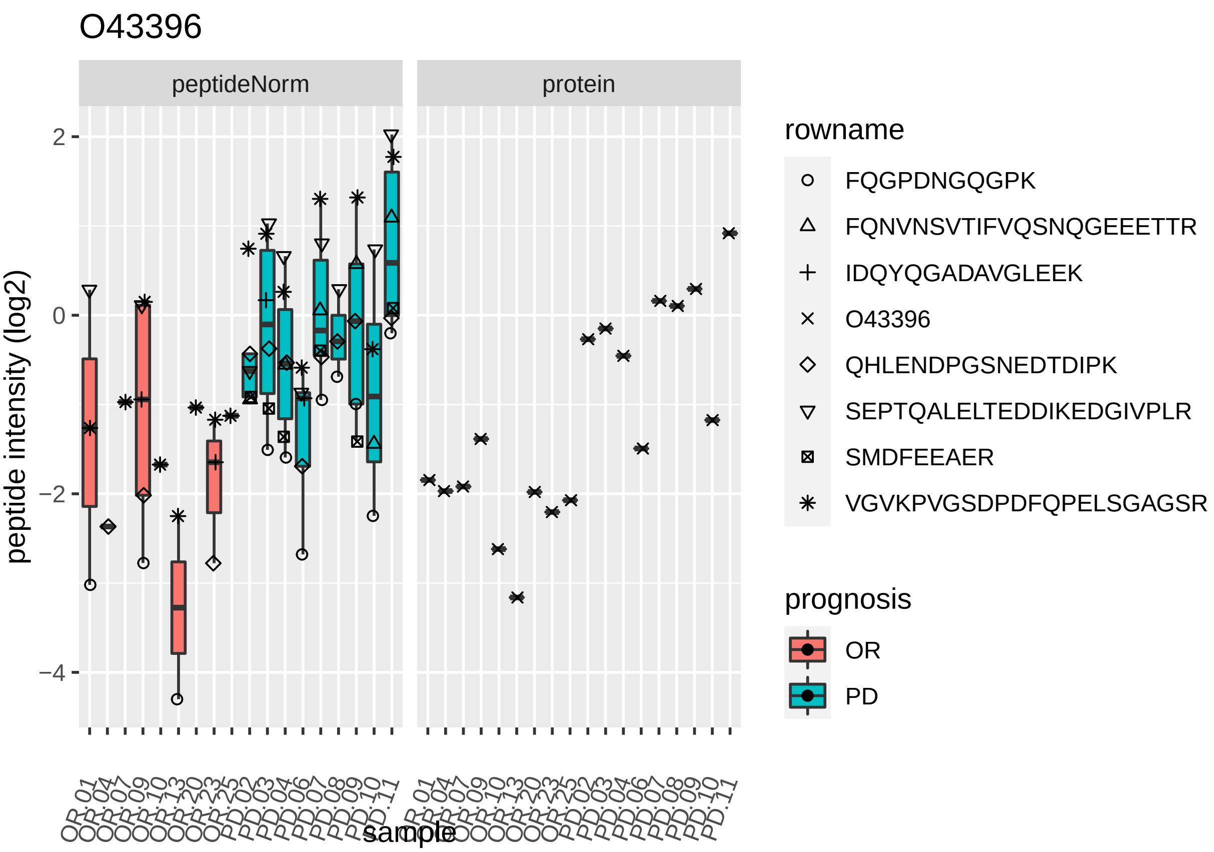
Q13765
peptideNorm
protein
value
3
2
1
0
−1
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

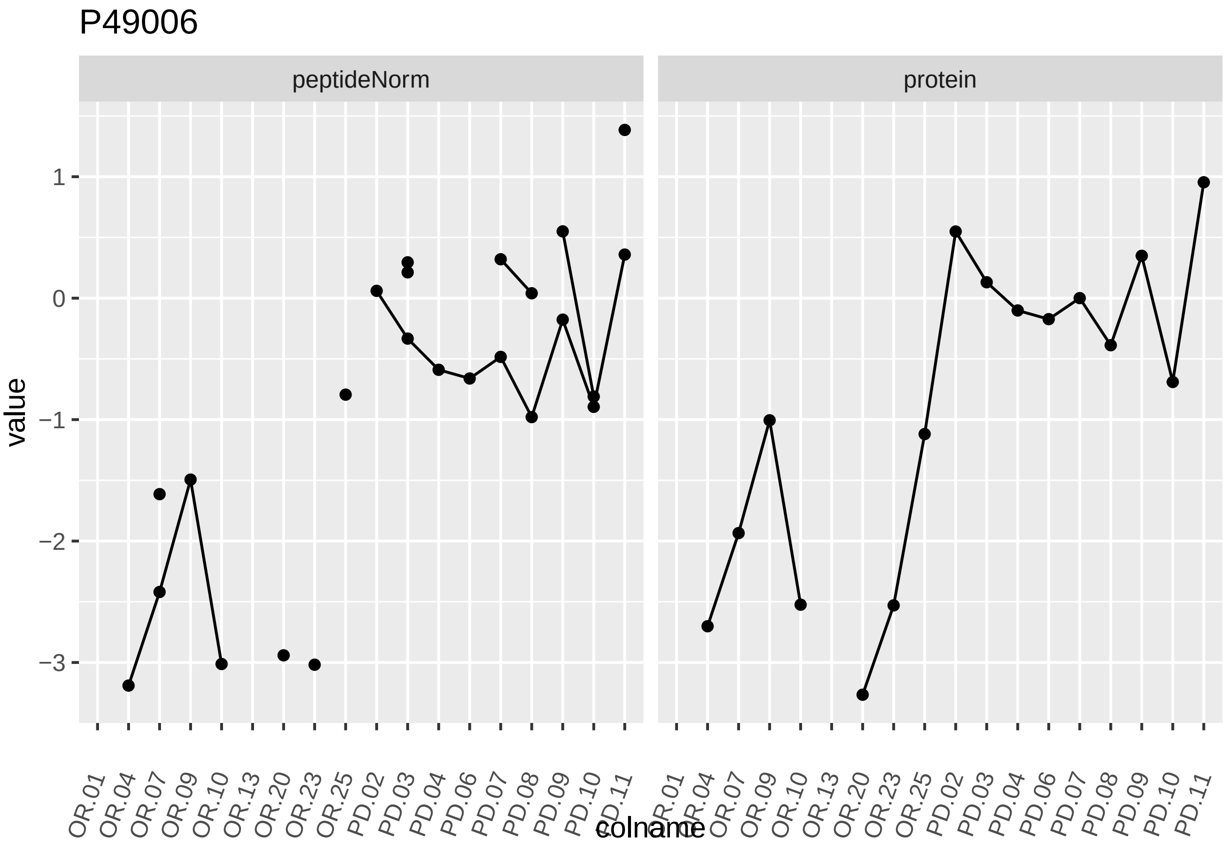

Q13765
peptideNorm
protein
peptide intensity (log2)
3
2
1
0
−1
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
sample
prognosis
OR
PD
rowname
DIELVMSQANVSR
IEDLSQQAQLAAAEK
NNSNDIVNAIMELTM
Q13765
SPASDTYIVFGEAK

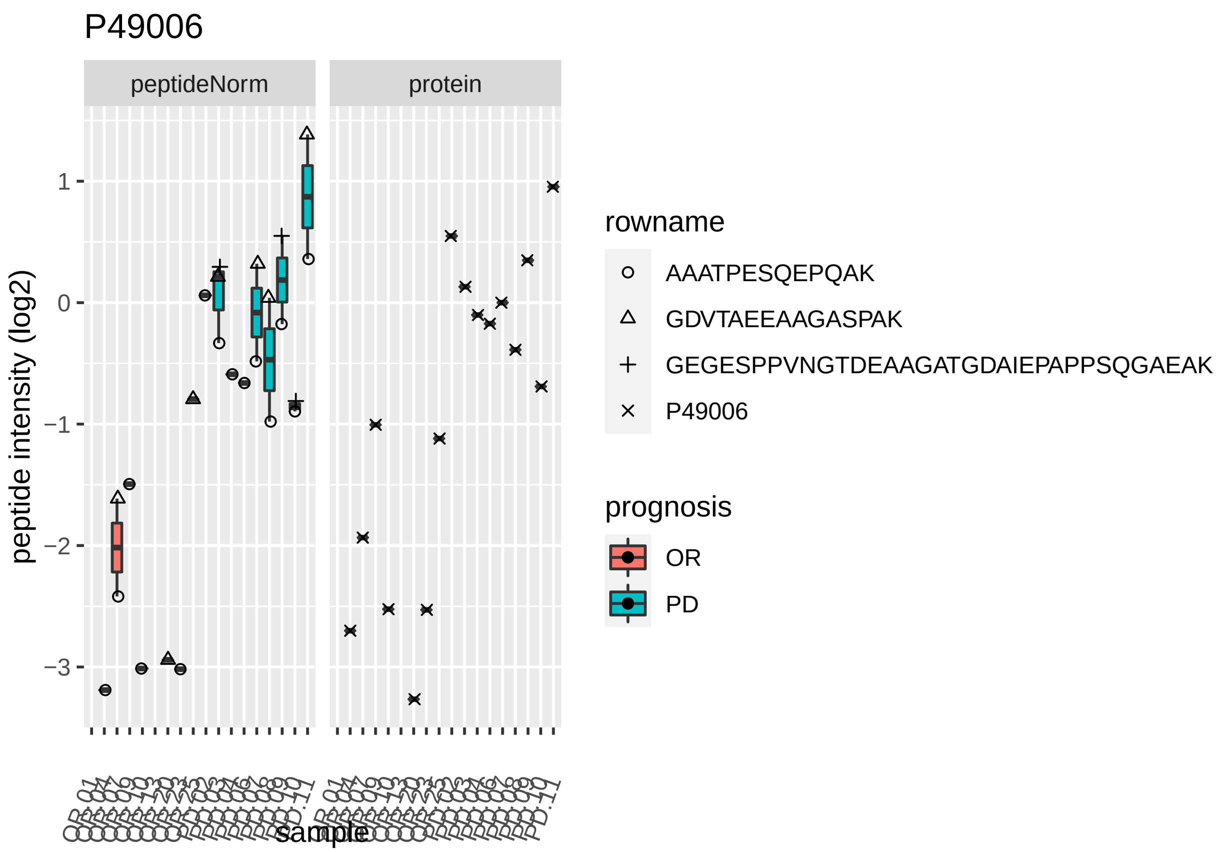

Q96K17
peptideNorm
protein
value
2
1
0
−1
−2
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11


Q96K17
peptideNorm
protein
peptide intensity (log2)
2
1
0
−1
−2
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.21
OR.23
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.21
OR.23
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
sample
rowname
○ APKPEDIDEEDDDVPDLVENFDEASKNEAN
△ LAEQFPR
+ Q96K17
prognosis
OR
PD

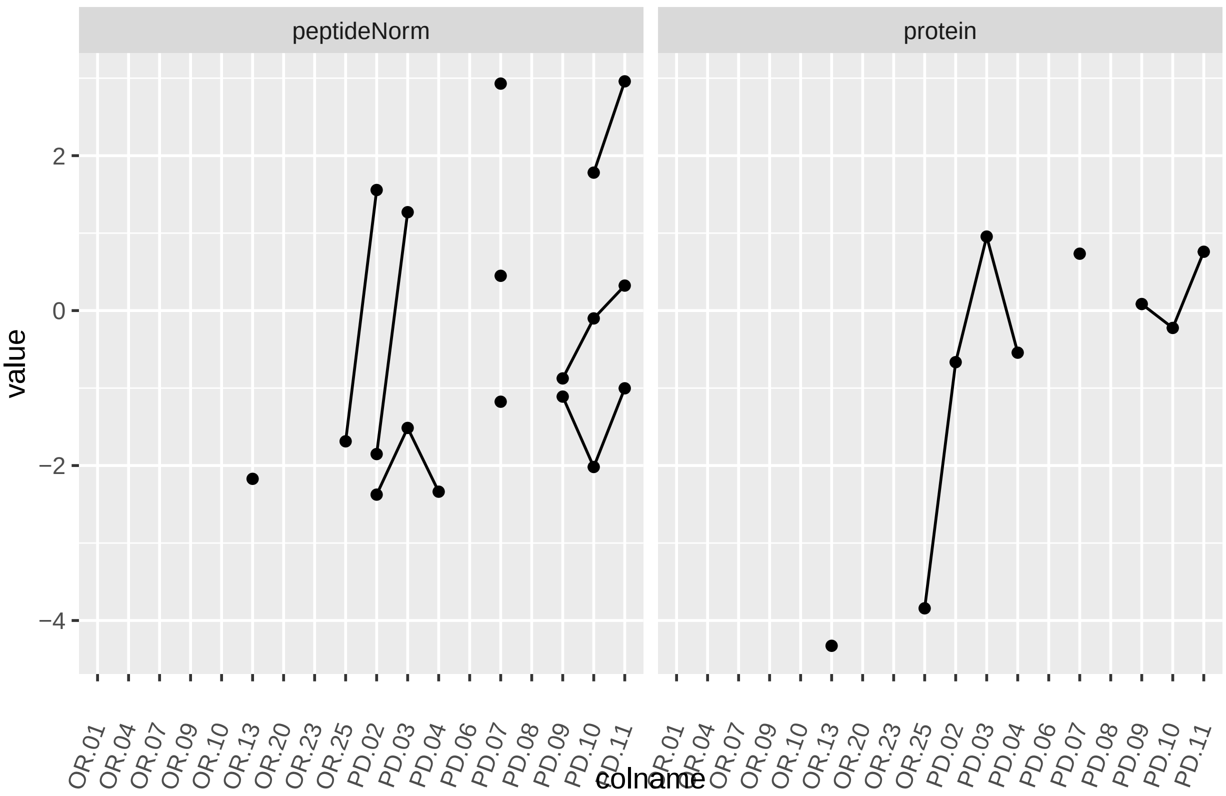

O43396
peptideNorm
protein
value
2
0
−2
−4
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

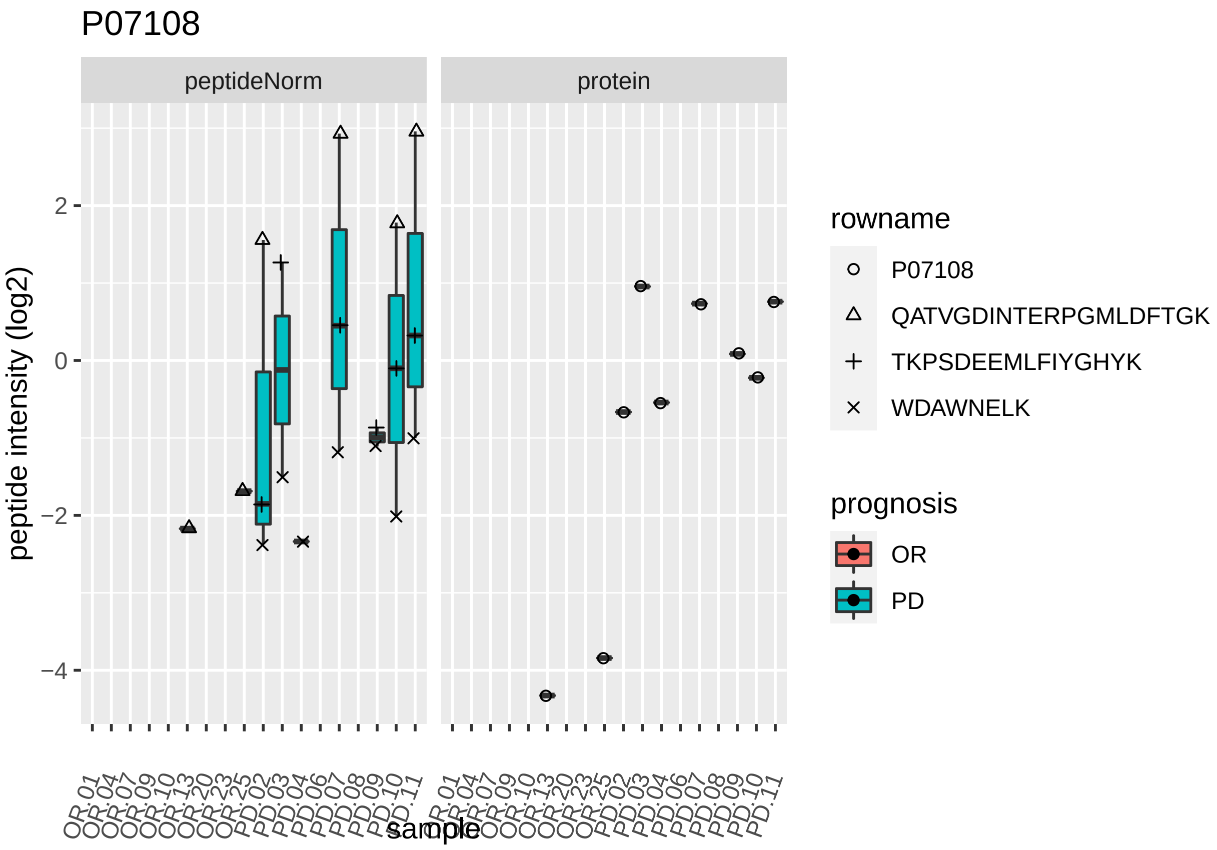

O43396
peptideNorm
protein
peptide intensity (log2)
2
0
−2
−4
sample
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
rowname
○ FQGPDNGQGPK
△ FQNVNSVTIFVQSNQGEEETTR
+ IDQYQGADAVGLEEK
× O43396
◇ QHLENDPGSNEDTDIPK
▽ SEPTQALELTEDDIKEDGIVPLR
⊠ SMDFEEAER
✳ VGVKPVGSDPDFQPELSGAGSR
prognosis
OR
PD

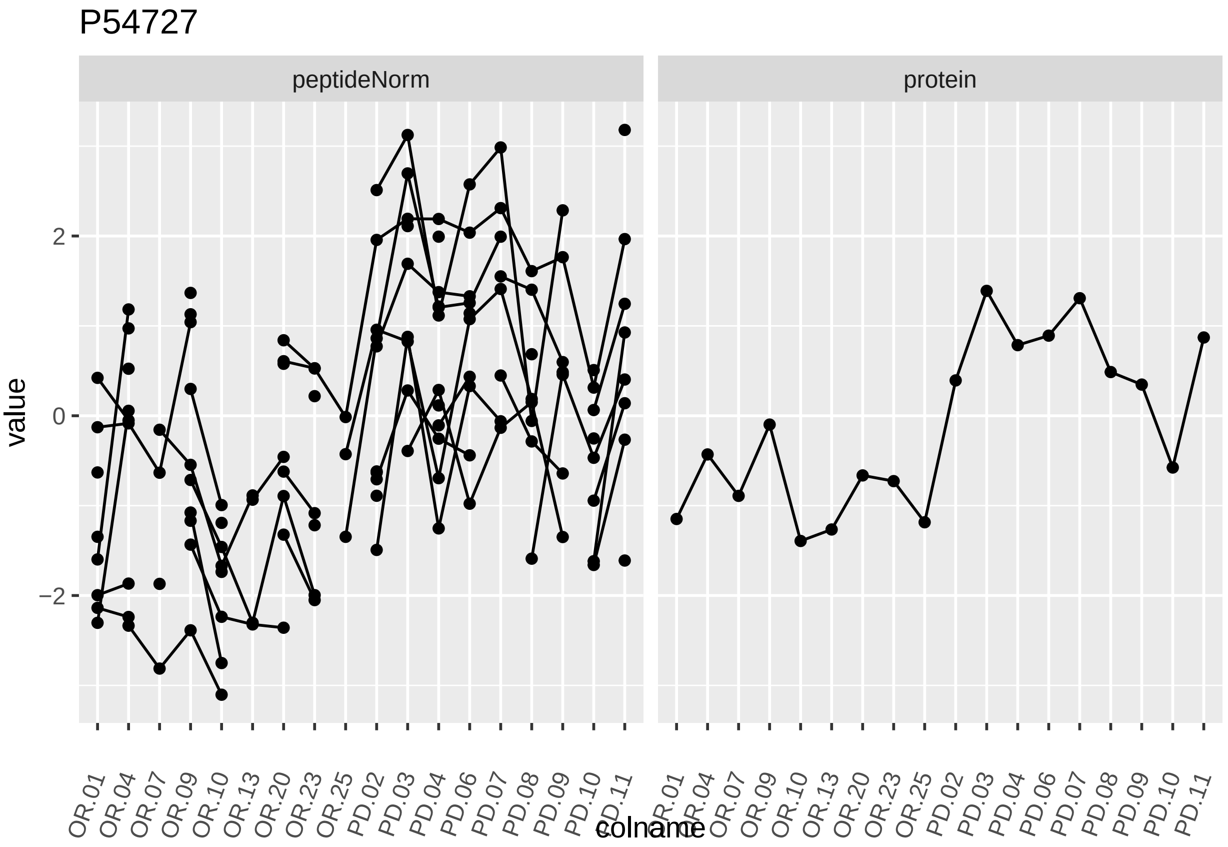

P49006
peptideNorm
protein
value
1
0
−1
−2
−3
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

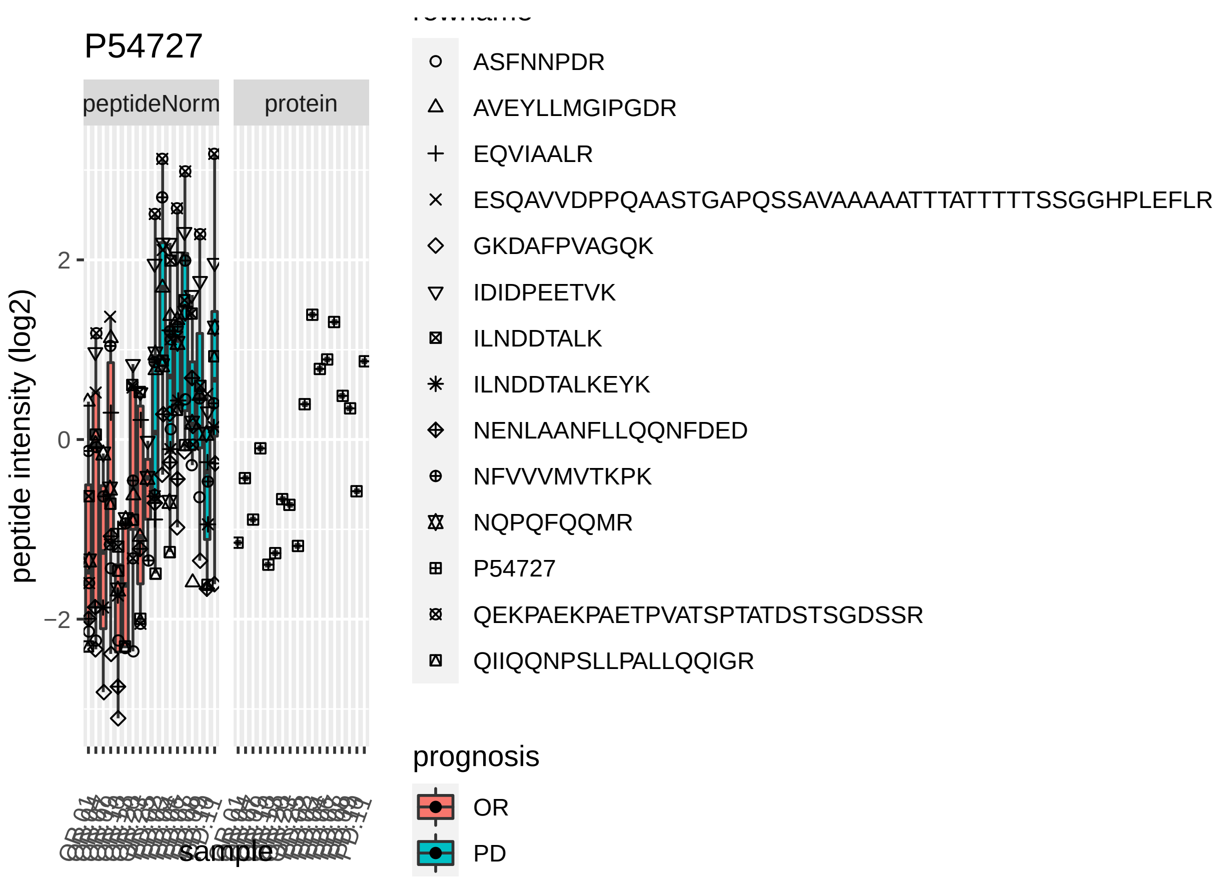

P49006
peptideNorm
protein
peptide intensity (log2)
1
0
−1
−2
−3
sample
rowname
○ AAATPESQEPQAK
△ GDVTAEEAAGASPAK
+ GEGESPPVNGTDEAAGATGDAIEPAPPSQGAEAK
× P49006
prognosis
OR
PD

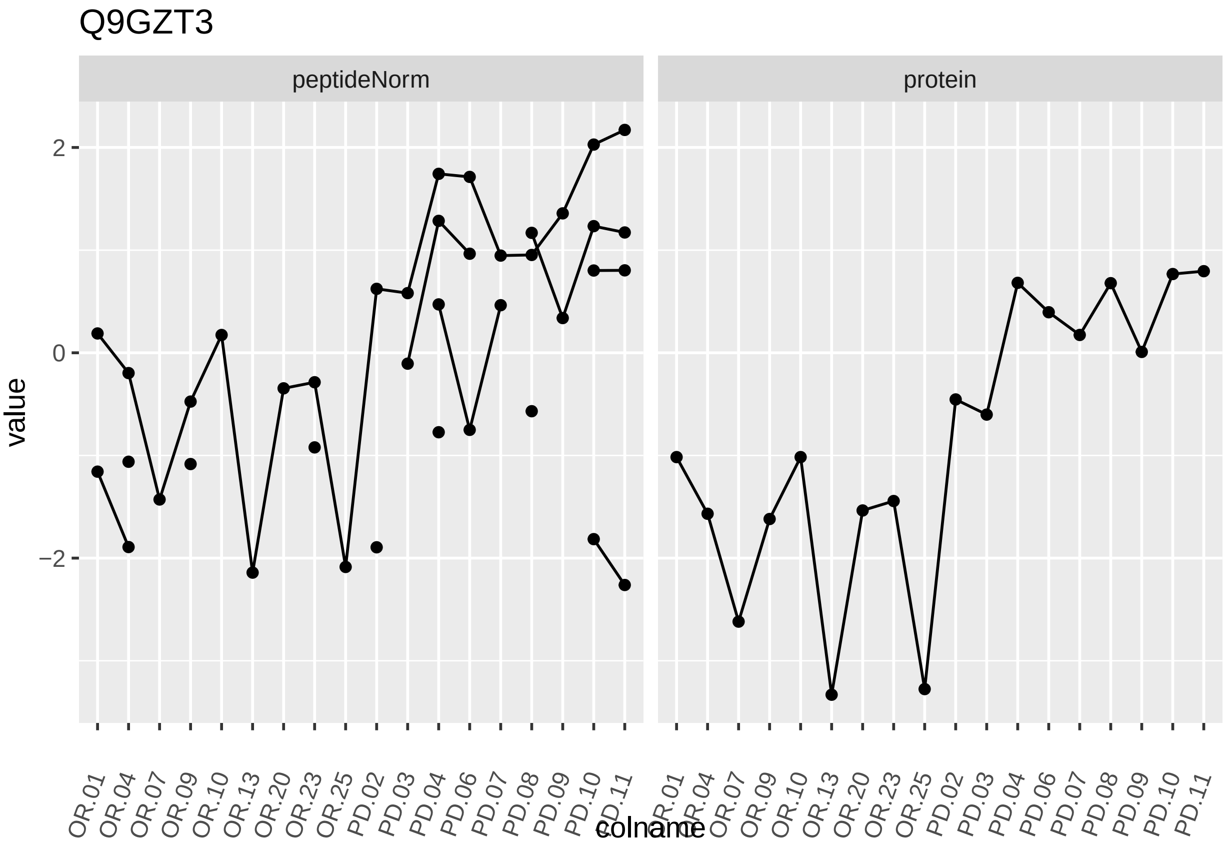
P07108

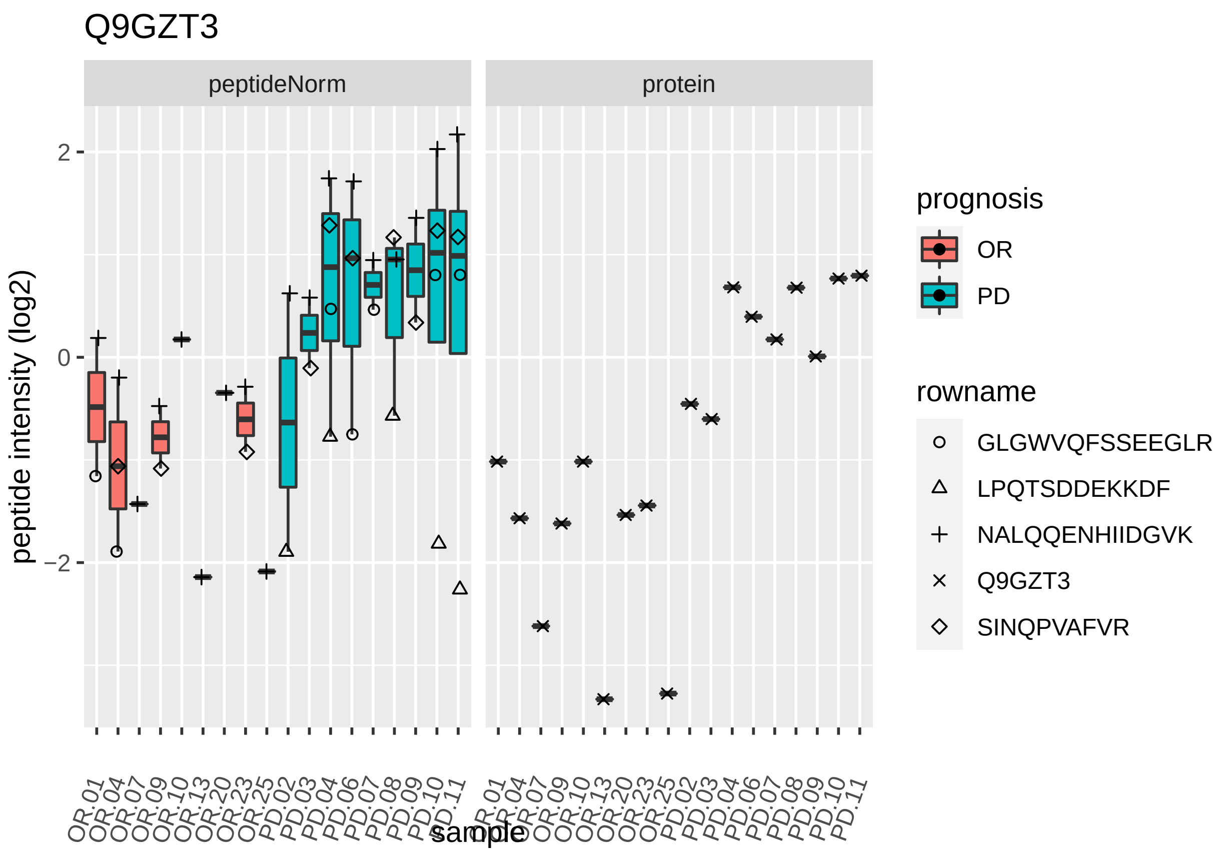

peptideNorm
protein
value
colname
2
0
−2
−4
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

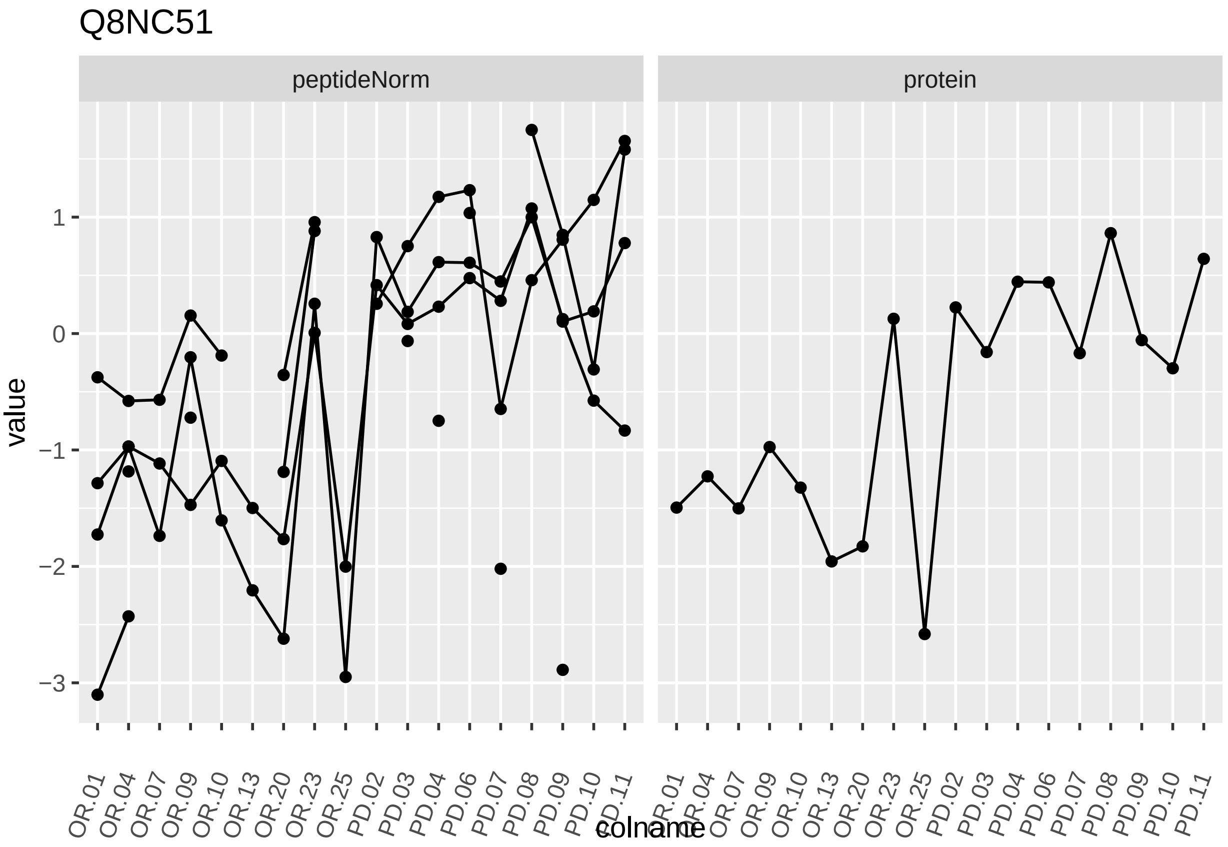

P07108
peptideNorm
protein
peptide intensity (log2)
2
0
−2
−4
sample
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
rowname
○ P07108
△ QATVGDINTERPGMLDFTGK
+ TKPSDEEMLFIYGHYK
× WDAWNELK
prognosis
OR
PD


P54727
peptideNorm
protein
value
2
0
−2
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11


P54727
peptideNorm
protein
peptide intensity (log2)
2
0
−2
sample
rowname
○ ASFNNPDR
△ AVEYLLMGIPGDR
+ EQVIAALR
× ESQAVVDPPQAASTGAPQSSAVAAAAATTTATTTTTSSGGHPLEFLR
◇ GKDAFPVAGQK
▽ IDIDPEETVK
⊠ ILNDDTALK
✳ ILNDDTALKEYK
◈ NENLAANFLLQQNFDED
⊕ NFVVVMVTKPK
✡ NQPQFQQMR
⊞ P54727
⊠ QEKPAEKPAETPVATSPTATDSTSGDSSR
◪ QIIQQNPSLLPALLQQIGR
prognosis
🟥 OR
🟦 PD


Q9GZT3
peptideNorm
protein
value
2
0
−2
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11


Q9GZT3
peptideNorm
protein
peptide intensity (log2)
2
0
−2
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
sample
prognosis
OR
PD
rowname
GLGWVQFSSEEGLR
LPQTSDDEKKDF
NALQQENHIIDGVK
Q9GZT3
SINQPVAFVR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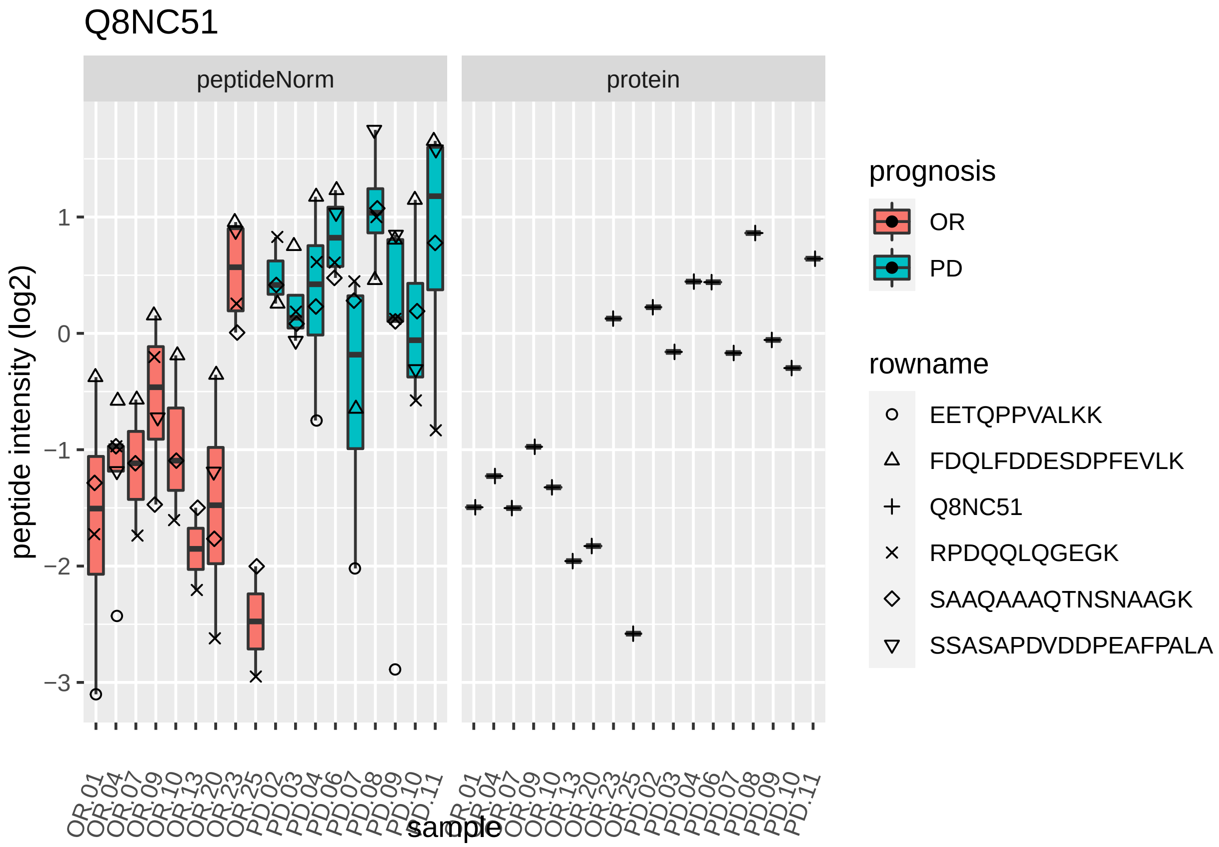
peptideNorm
protein
value
1
0
−1
−2
−3
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11


Q8NC51
peptideNorm
protein
peptide intensity (log2)
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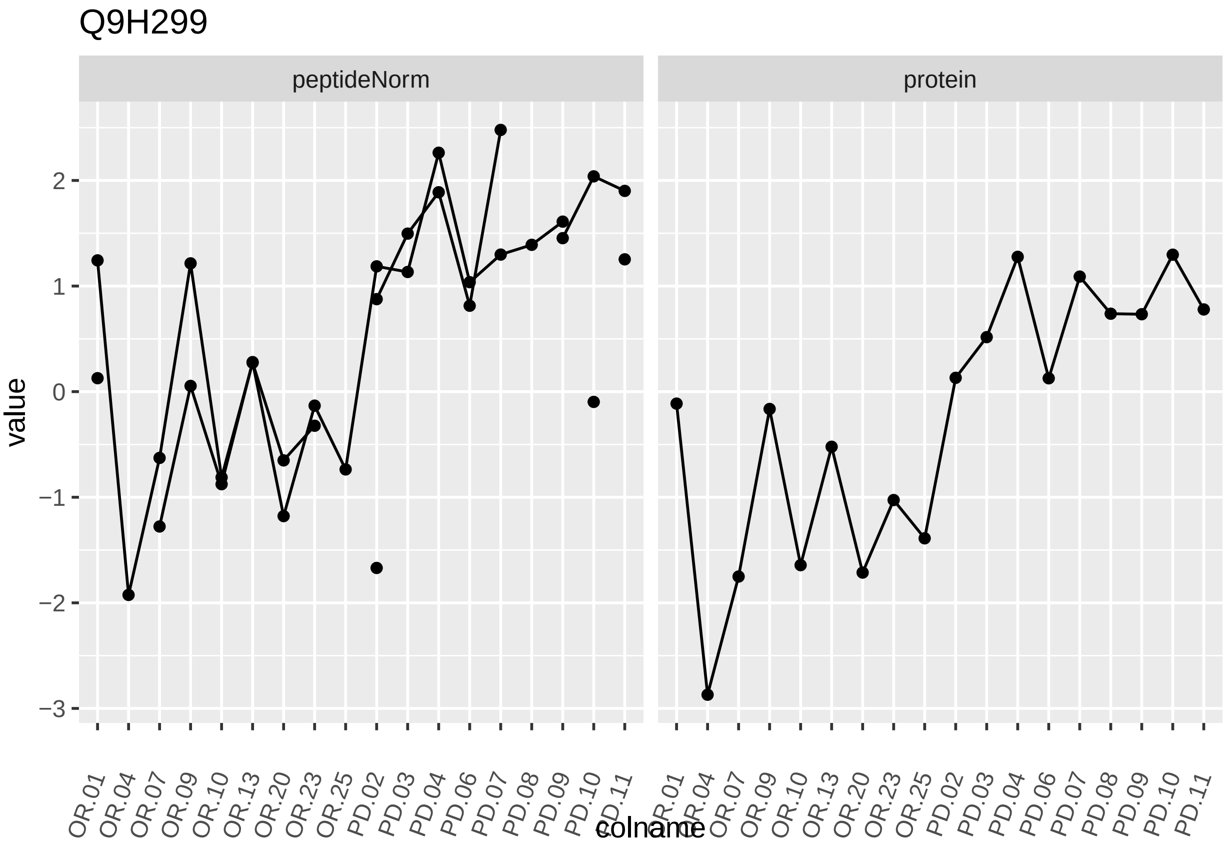
0
−1
−2
−3
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
sample
prognosis
OR
PD
rowname
EETQPPVALKK
FDQLFDDESDPFEVLK
Q8NC51
RPDQQLQGEGK
SAAQAAAQTNSNAAGK
SSASAPDVDDPEAFPALA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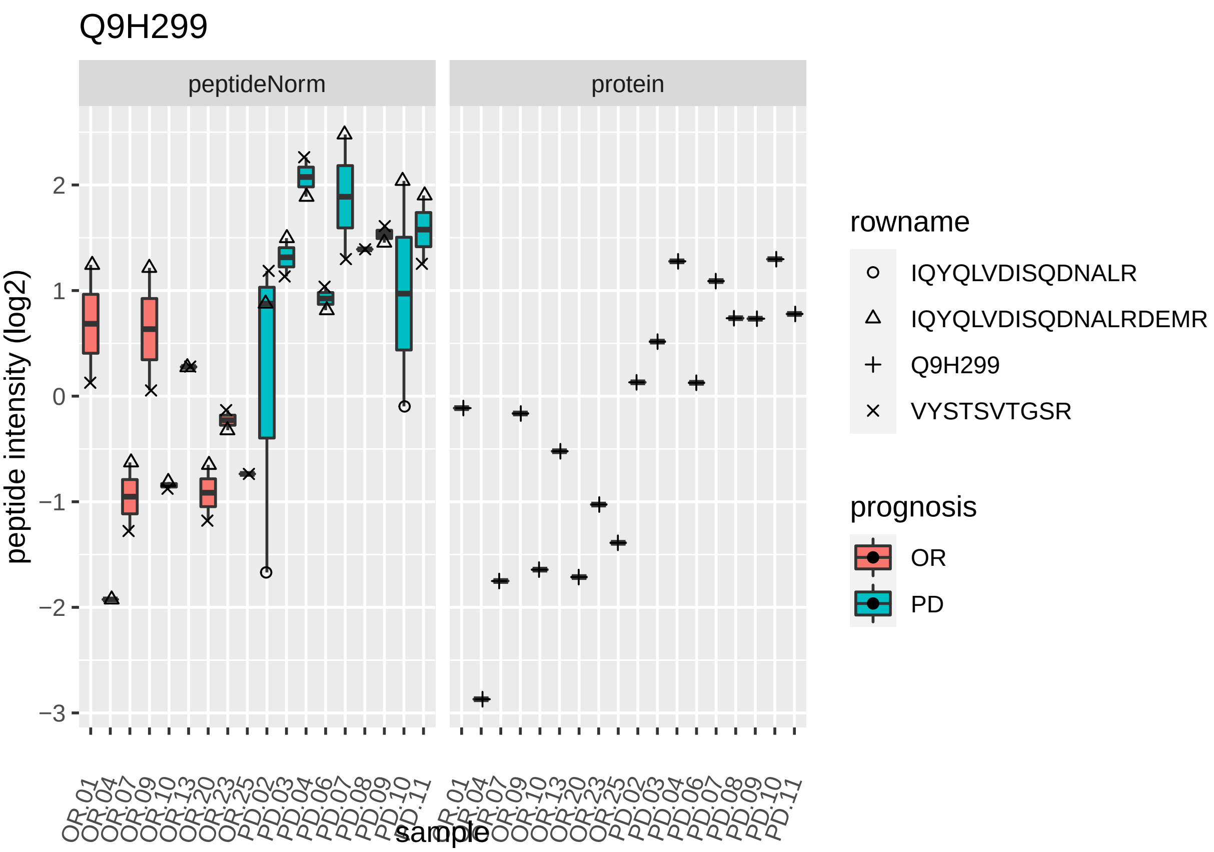
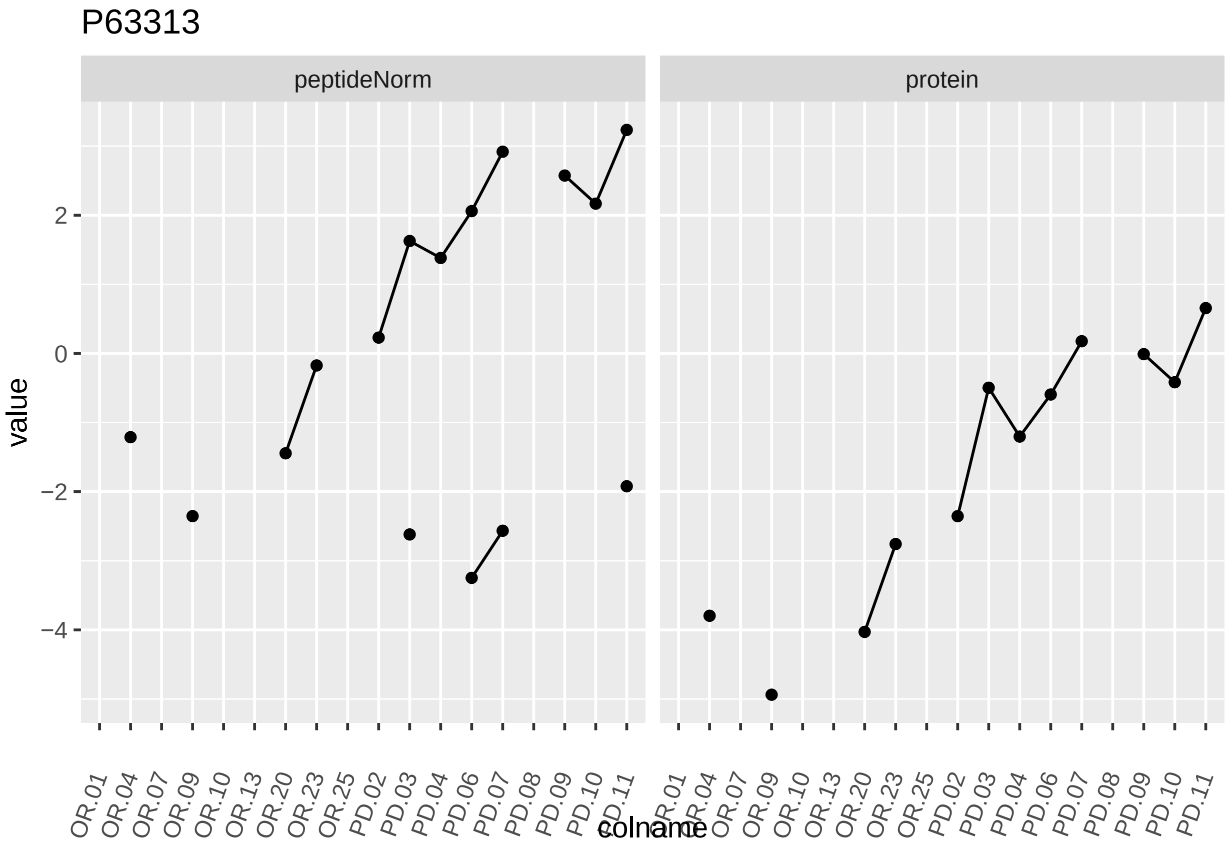
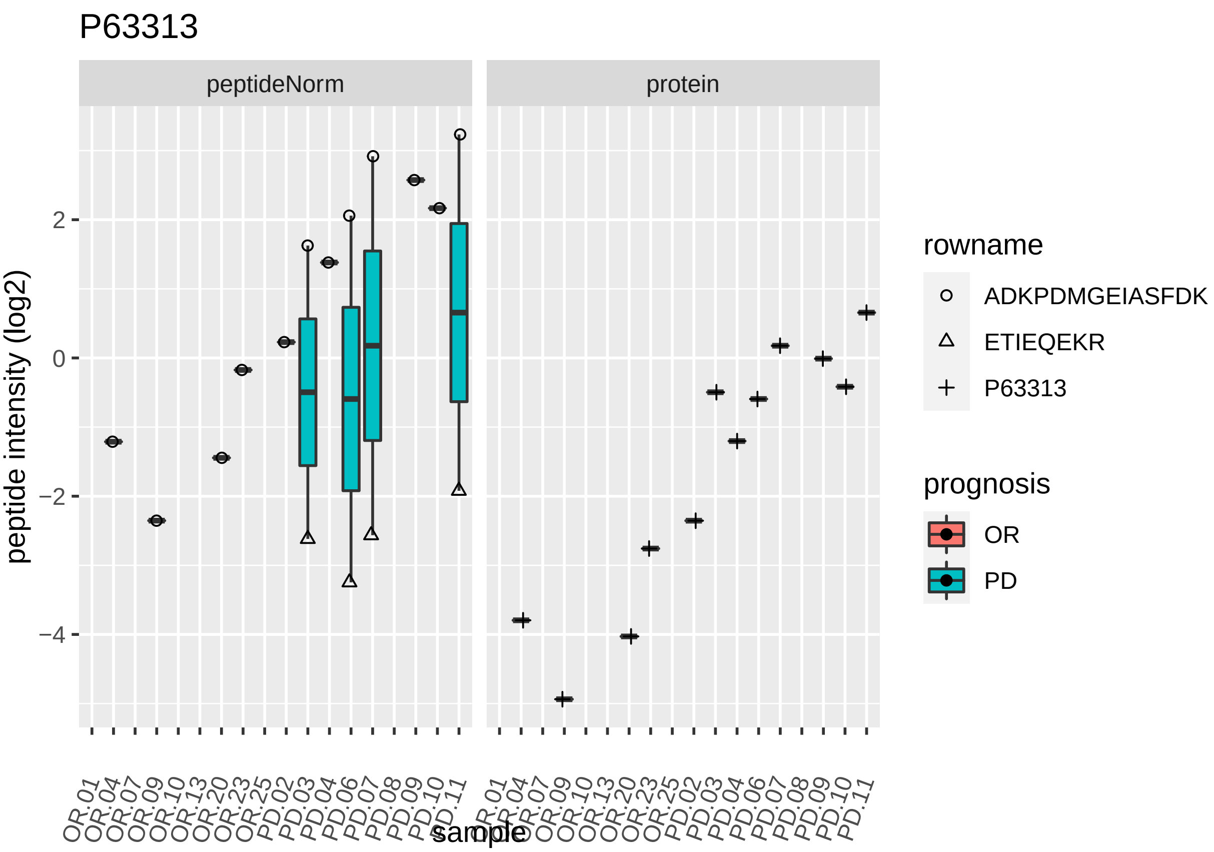
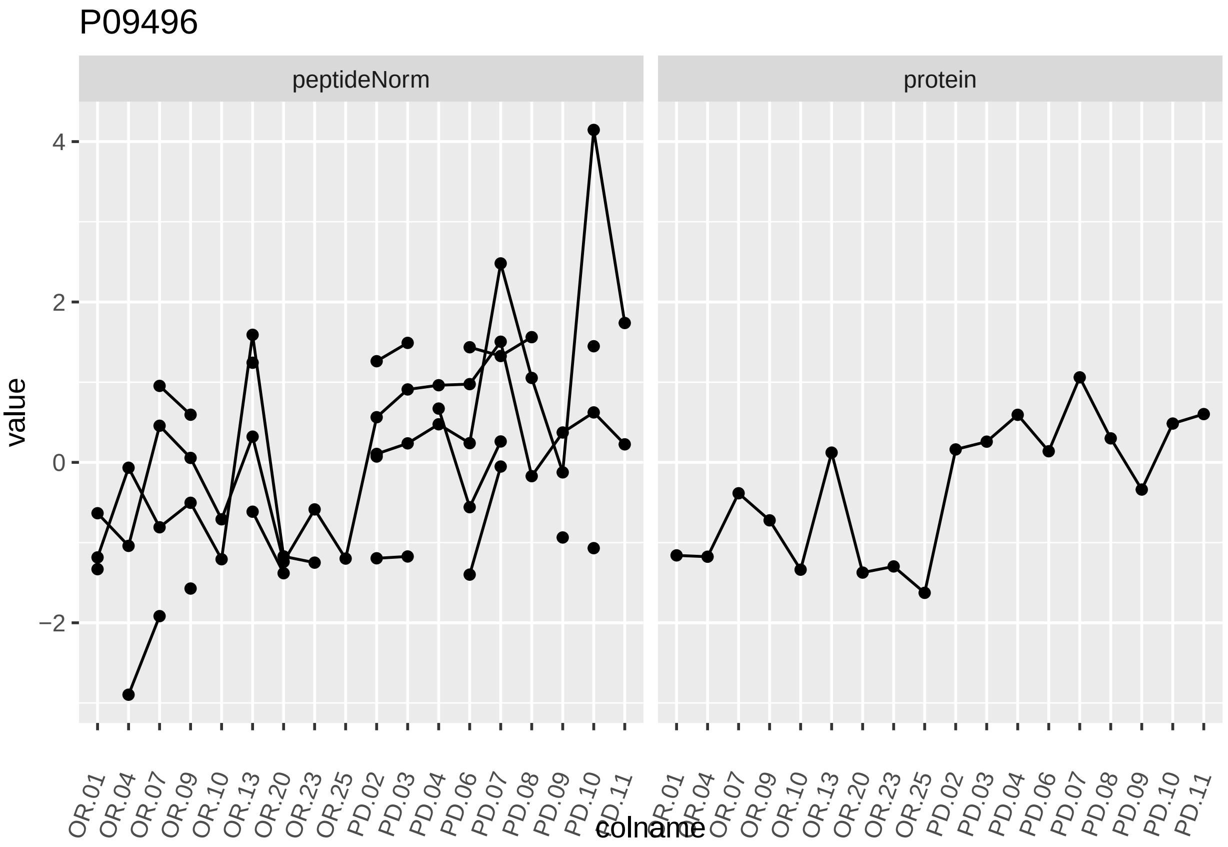
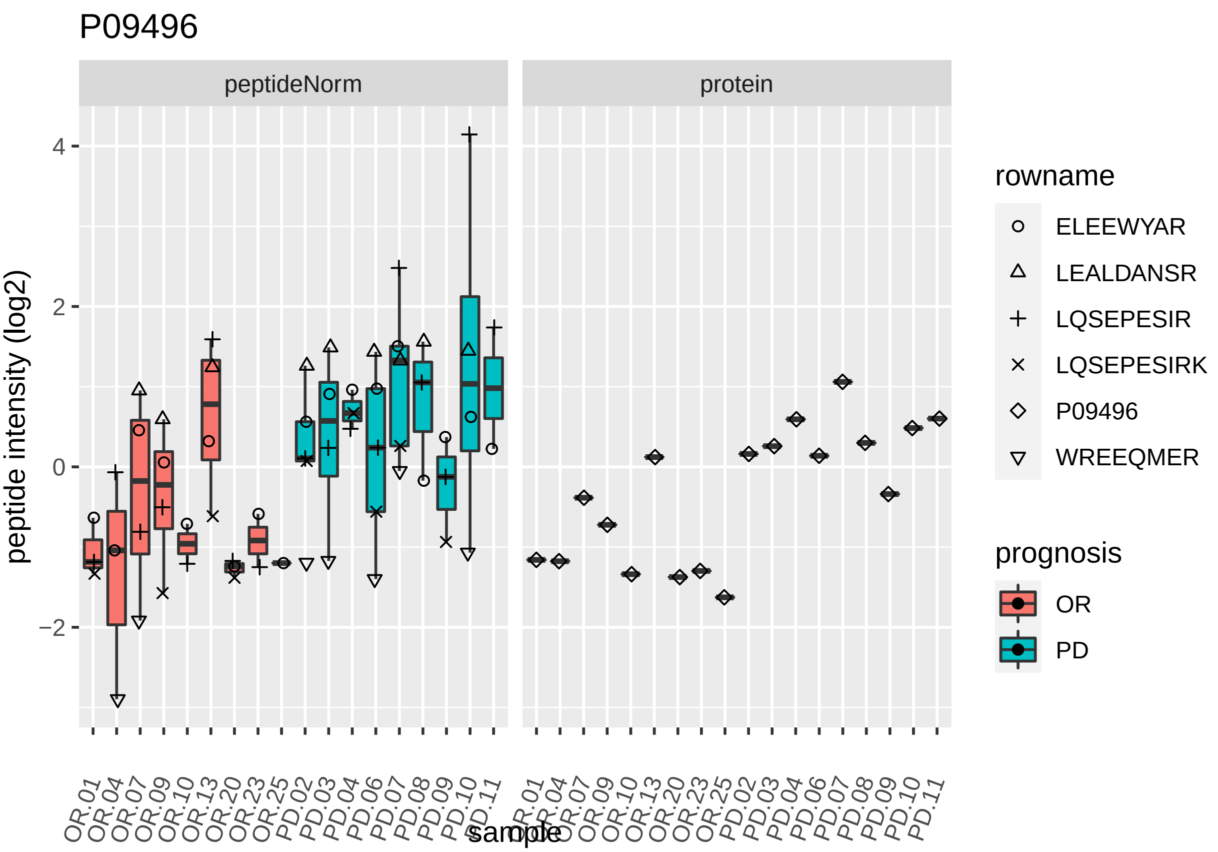
peptideNorm
protein
value
2
1
0
−1
−2
−3
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
colname

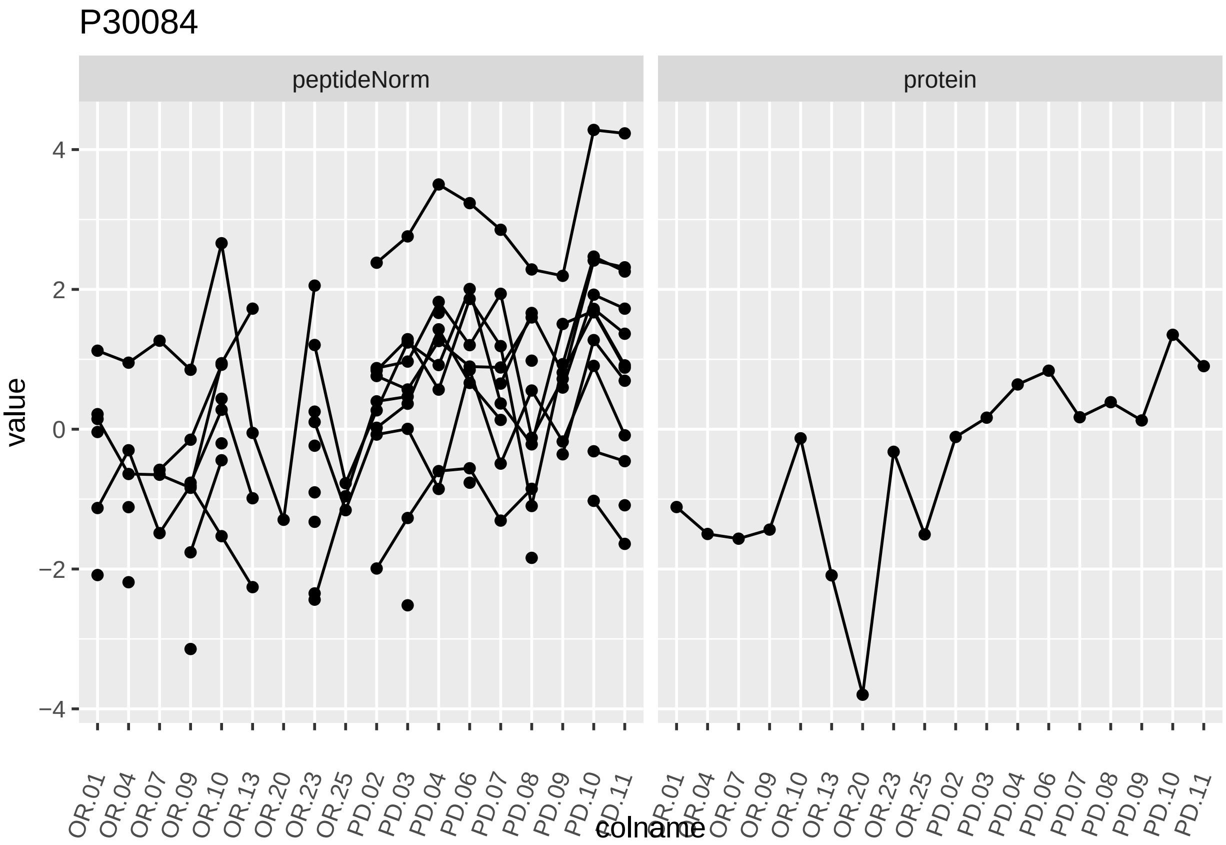

Q9H299
peptideNorm
protein
peptide intensity (log2)
2
1
0
−1
−2
−3
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
sample
rowname
○ IQYQLVDISQDNALR
△ IQYQLVDISQDNALRDEMR
+ Q9H299
× VYSTSVTGSR
prognosis
OR
PD

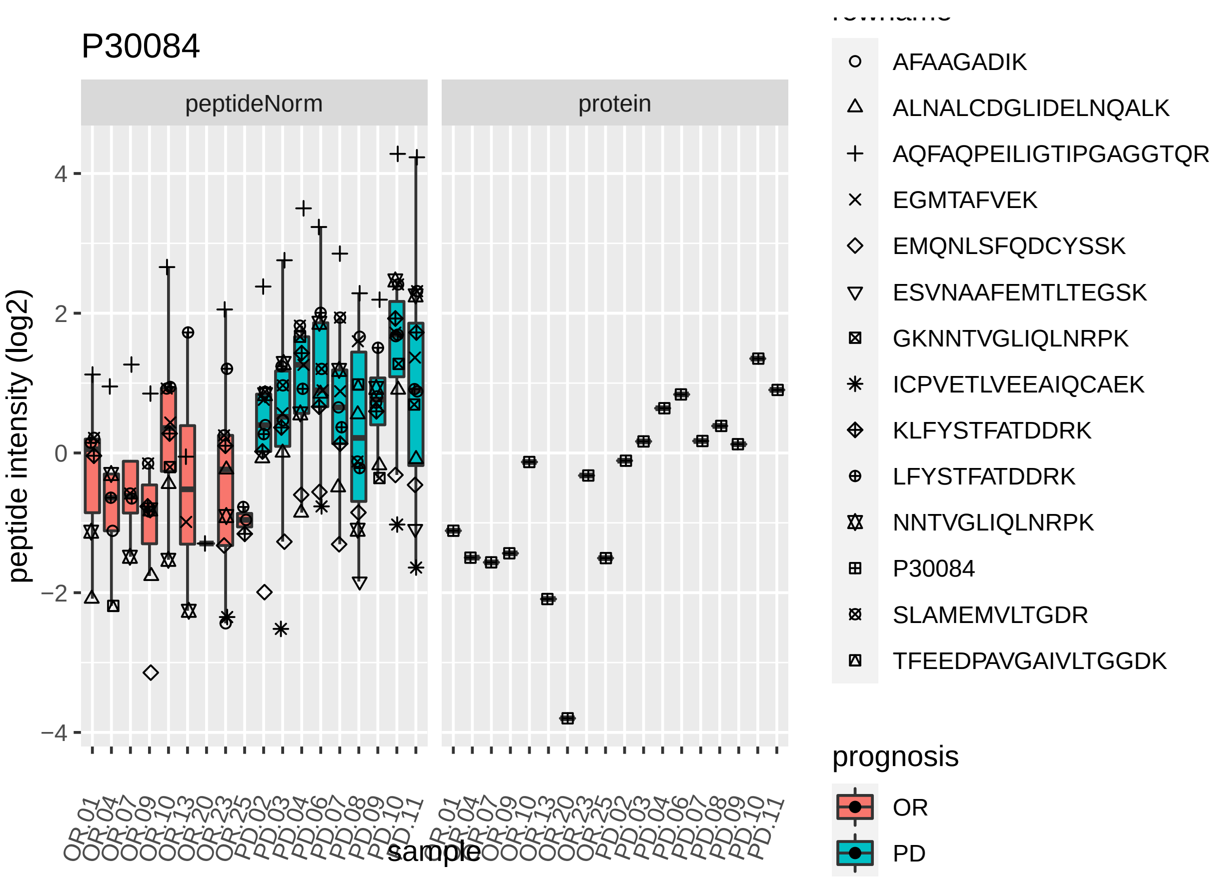

P63313
peptideNorm
protein
value
2
0
−2
−4
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

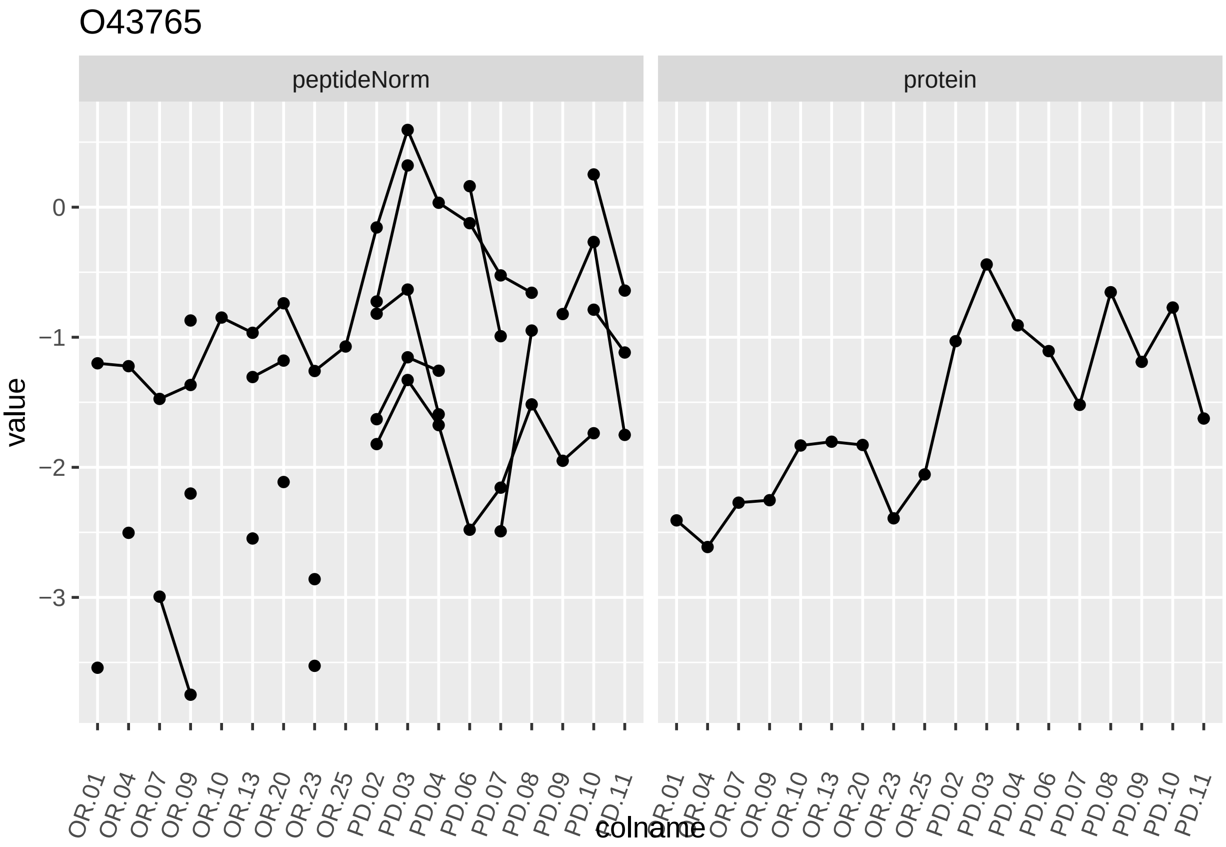

P63313
peptideNorm
protein
peptide intensity (log2)
2
0
−2
−4
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
sample
rowname
ADKPDMGEIASFDK
ETIEQEKR
P63313
prognosis
OR
PD

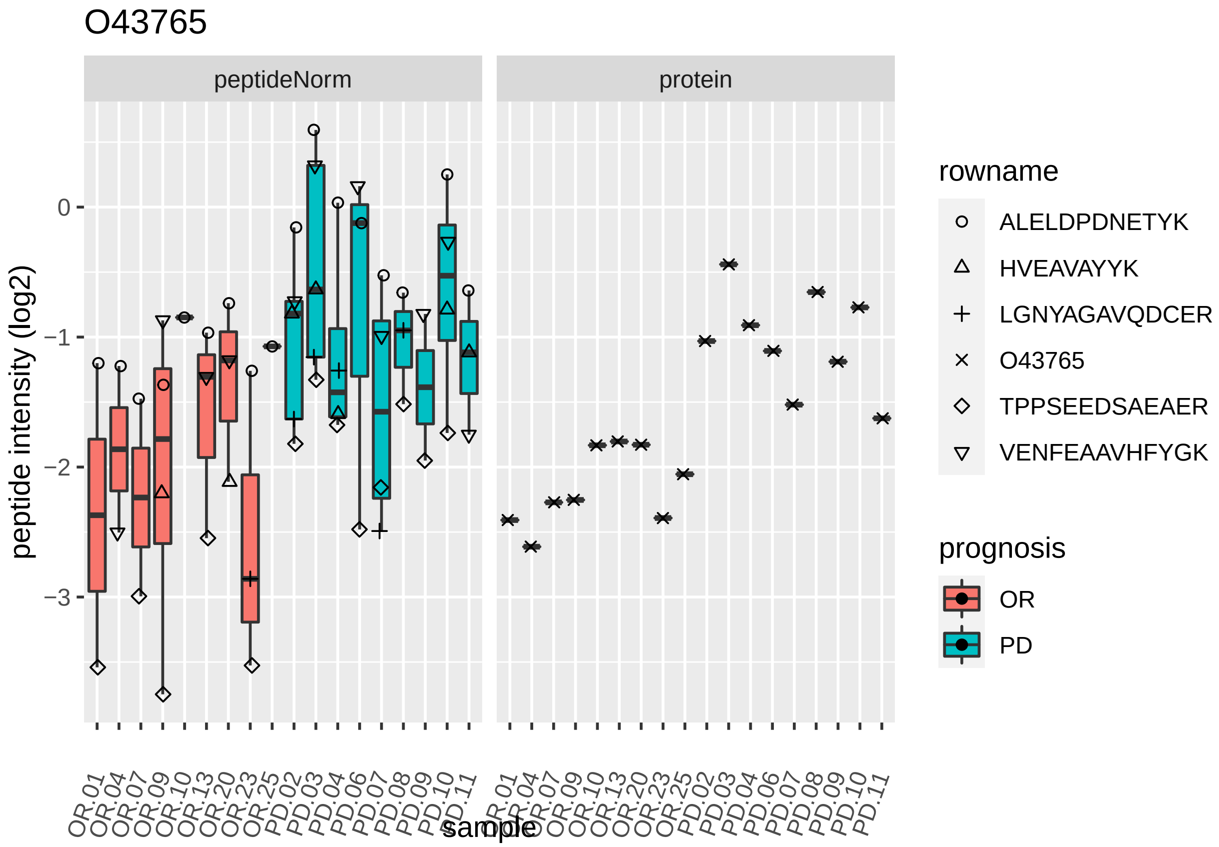

P09496
peptideNorm
protein
value
4
2
0
−2
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

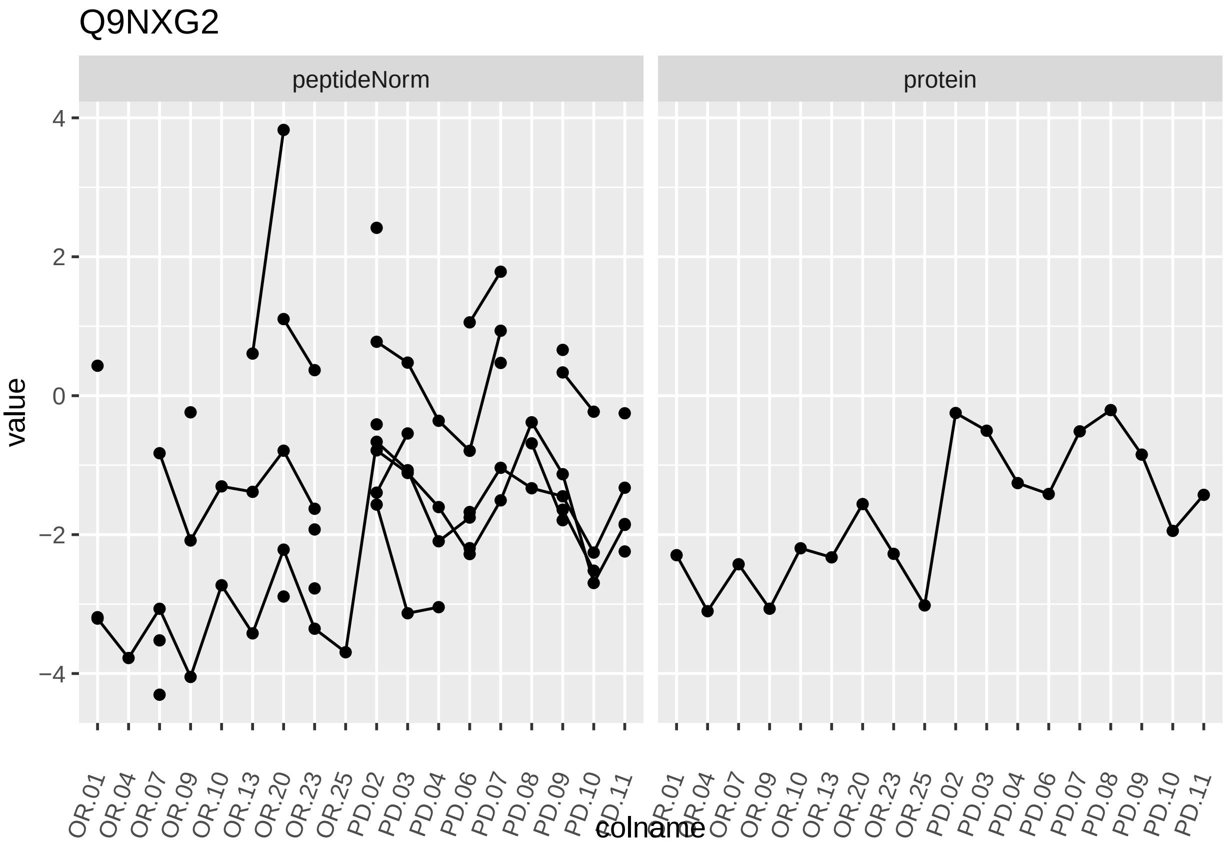

P09496
peptideNorm
protein
peptide intensity (log2)
4
2
0
−2
sample
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
rowname
○ ELEEWYAR
△ LEALDANSR
+ LQSEPESIR
× LQSEPESIRK
◇ P09496
▽ WREEQMER
prognosis
OR
PD

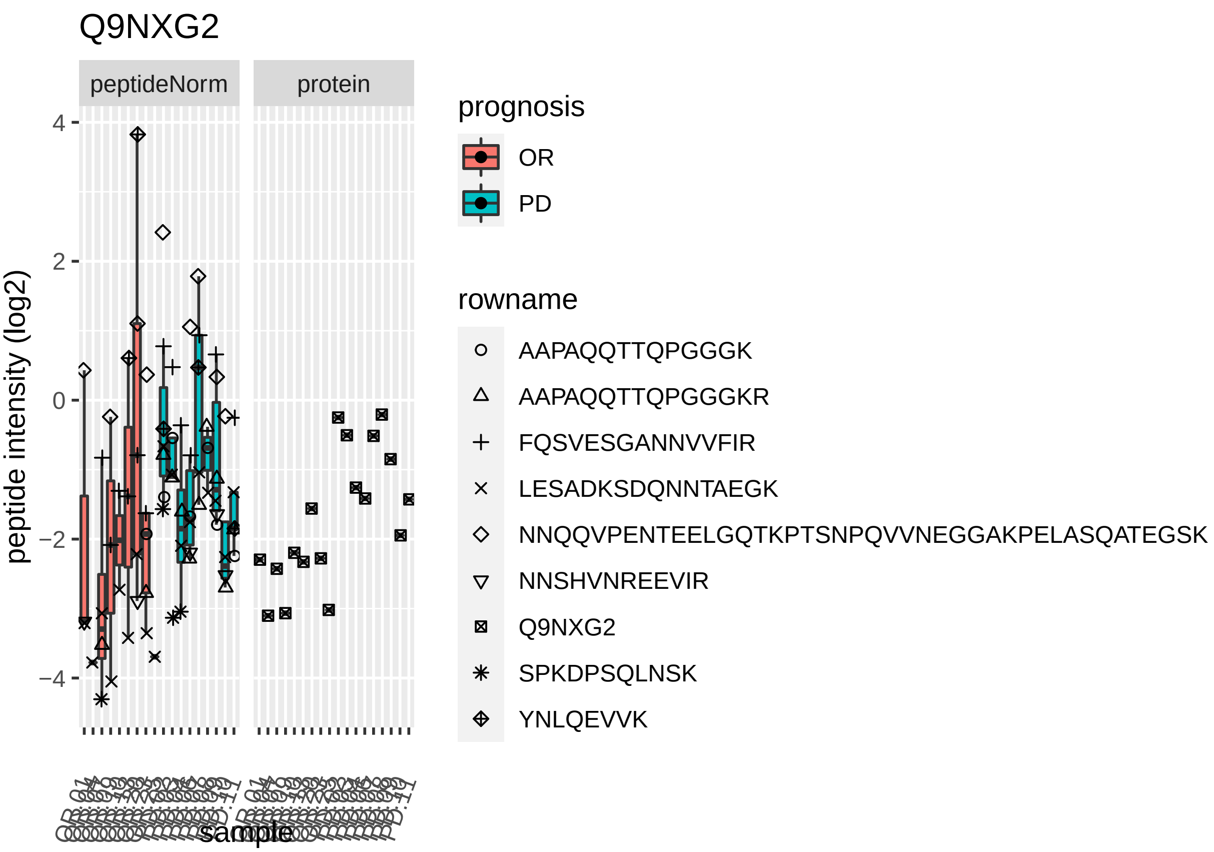

P30084
peptideNorm
protein
value
4
2
0
−2
−4
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

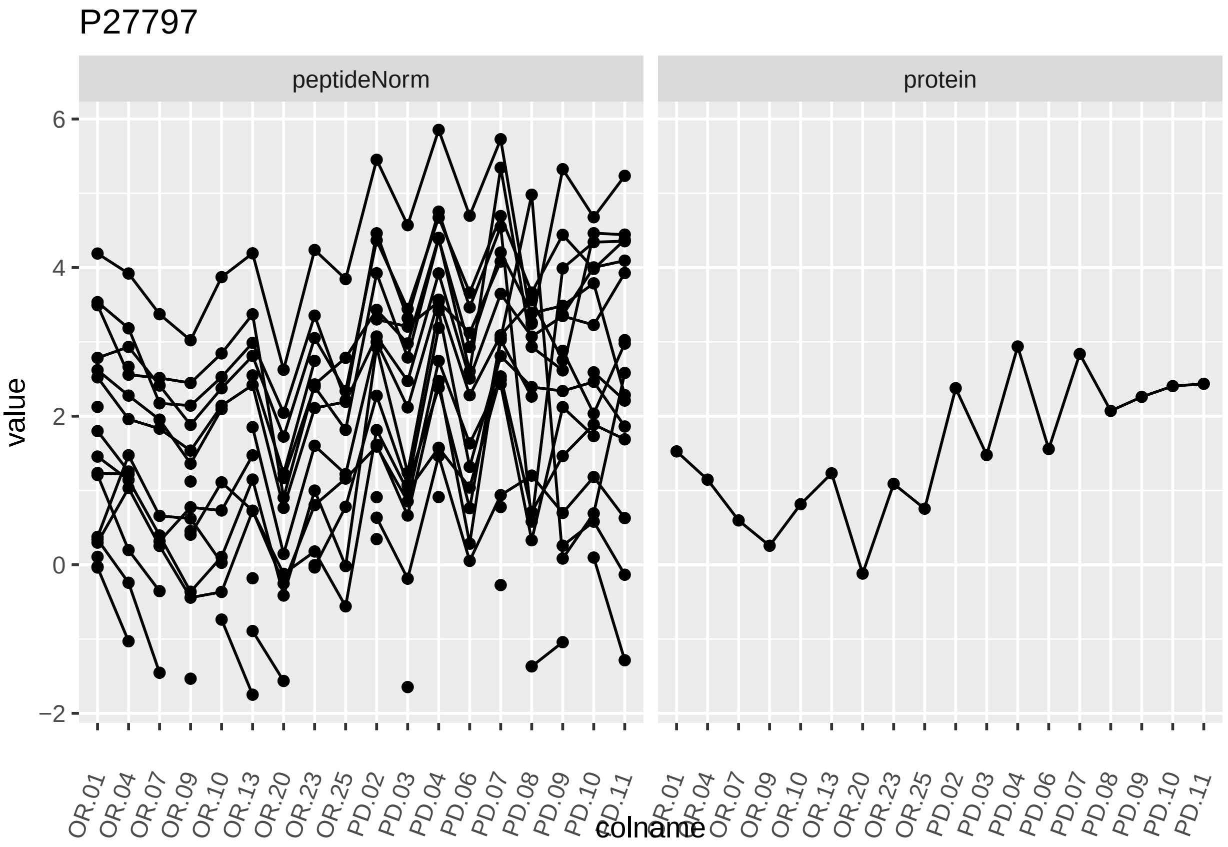

P30084
peptideNorm
protein
peptide intensity (log2)
4
2
0
−2
−4
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
sample
rowname
AFAAGADIK
ALNALCDGLIDELNQALK
AQFAQPEILIGTIPGAGGTQR
EGMTAFVEK
EMQNLSFQDCYSSK
ESVNAAFEMTLTEGSK
GKNNTVGLIQLNRPK
ICPVETLVEEAIQCAEK
KLFYSTFATDDRK
LFYSTFATDDRK
NNTVGLIQLNRPK
P30084
SLAMEMVLTGDR
TFEEDPAVGAIVLTGGDK
prognosis
OR
PD

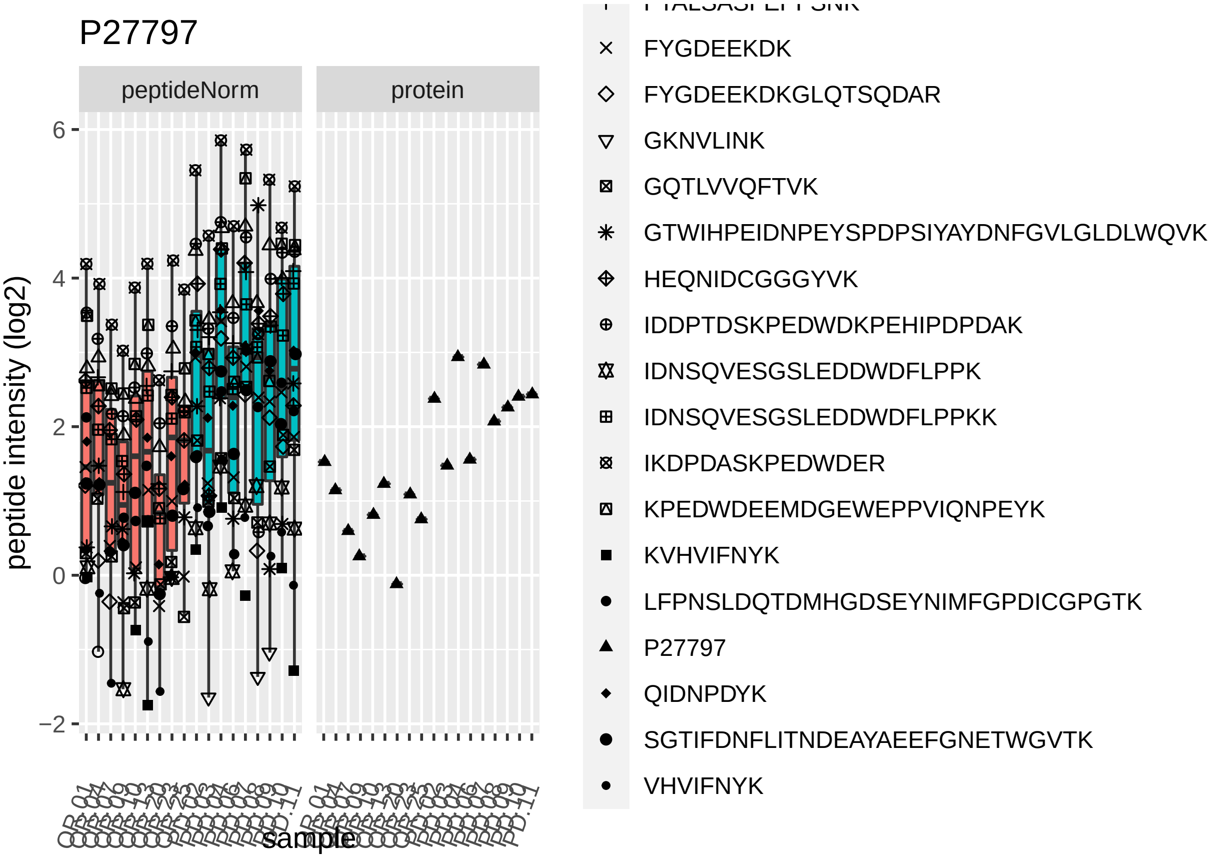

O43765
peptideNorm
protein
value
0
−1
−2
−3
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

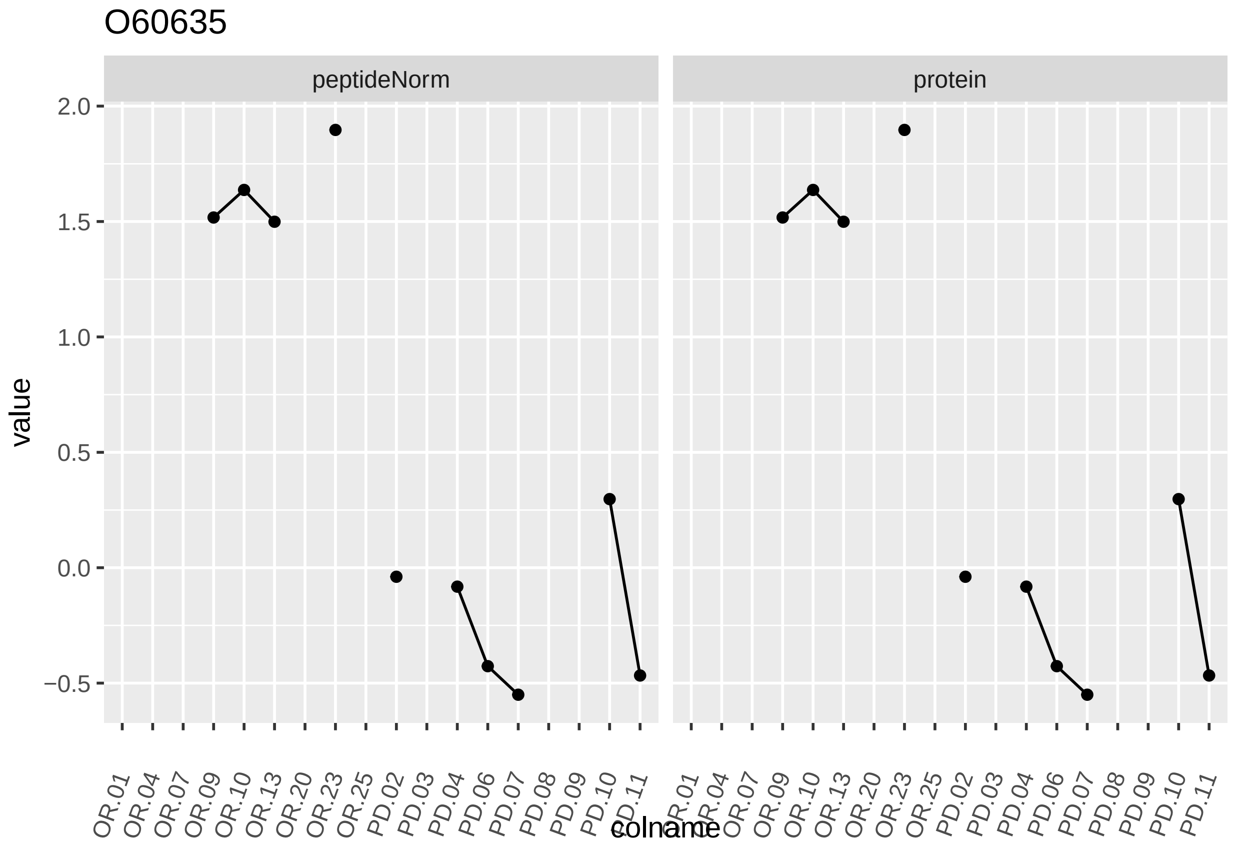

O43765
peptideNorm
protein
peptide intensity (log2)
0
−1
−2
−3
sample
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
rowname
○ ALELDPDNETYK
△ HVEAVAYYK
+ LGNYAGAVQDCER
× O43765
◇ TPPSEEDSAEAER
▽ VENFEAAVHFYGK
prognosis
🟥 OR
🟦 PD


Q9NXG2
peptideNorm
protein
value
4
2
0
−2
−4
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11


Q9NXG2
peptideNorm
protein
peptide intensity (log2)
4
2
0
−2
−4
sample
prognosis
OR
PD
rowname
AAPAQQTTQPGGGK
AAPAQQTTQPGGGKR
FQSVESGANNVVFIR
LESADKSDQNNTAEGK
NNQQVPENTEELGQTKPTSNPQVVNEGGAKPELASQATEGSK
NNSHVNREEVIR
Q9NXG2
SPKDPSQLNSK
YNLQEVVK


P27797
peptideNorm
protein
value
6
4
2
0
−2
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
colname


P27797
peptideNorm
protein
peptide intensity (log2)
6
4
2
0
−2
sample
FYGDEEKDK
FYGDEEKDKGLQTSQDAR
GKNVLINK
GQTLVVQFTVK
GTWIHPEIDNPEYSPDPSIYAYDNFGVLGLDLWQVK
HEQNIDCGGGYVK
IDDPTDSKPEDWDKPEHIPDPDAK
IDNSQVESGSLEDDWDFLPPK
IDNSQVESGSLEDDWDFLPPKK
IKDPDASKPEDWDER
KPEDWDEEMDGEWEPPVIQNPEYK
KVHVIFNYK
LFPNSLDQTDMHGDSEYNIMFGPDICGPGTK
P27797
QIDNPDYK
SGTIFDNFLITNDEAYAEEFGNETWGVTK
VHVIFNYK


O60635
peptideNorm
protein
value
2.0
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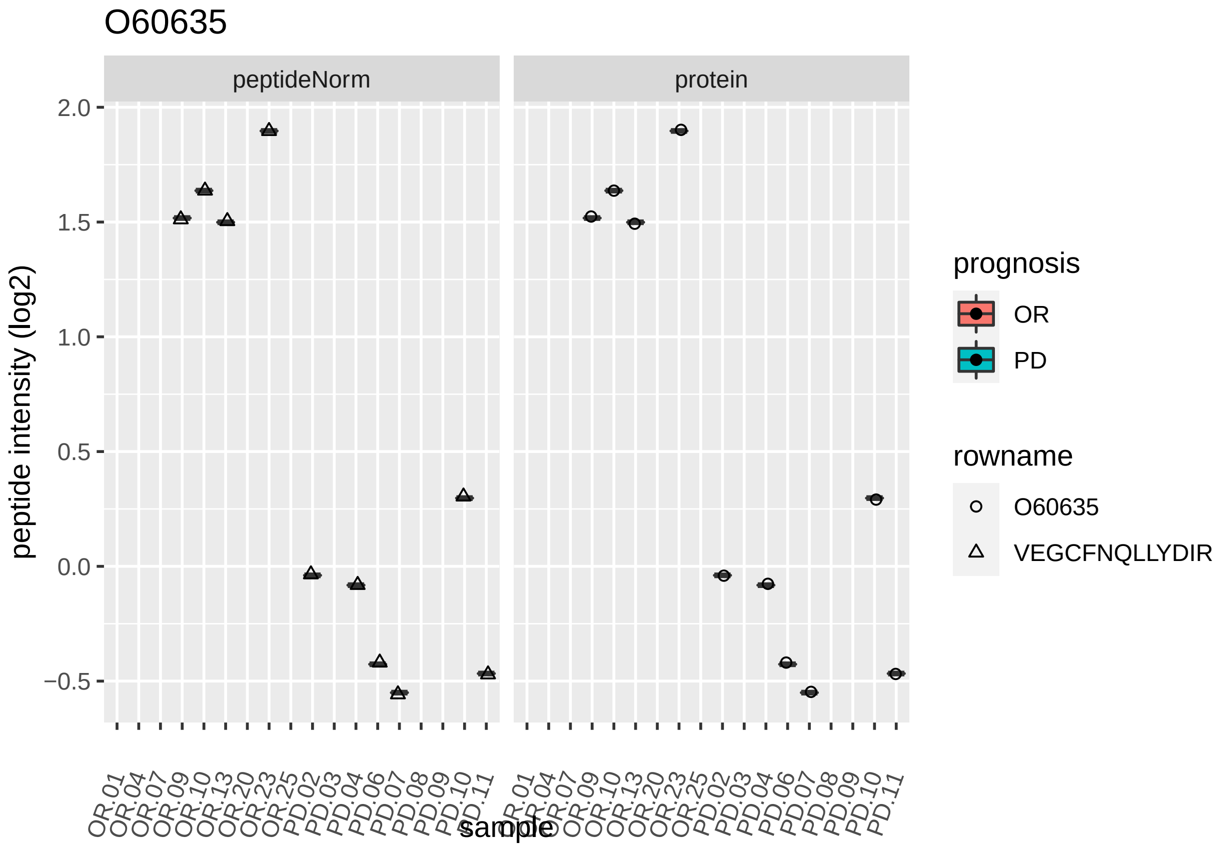
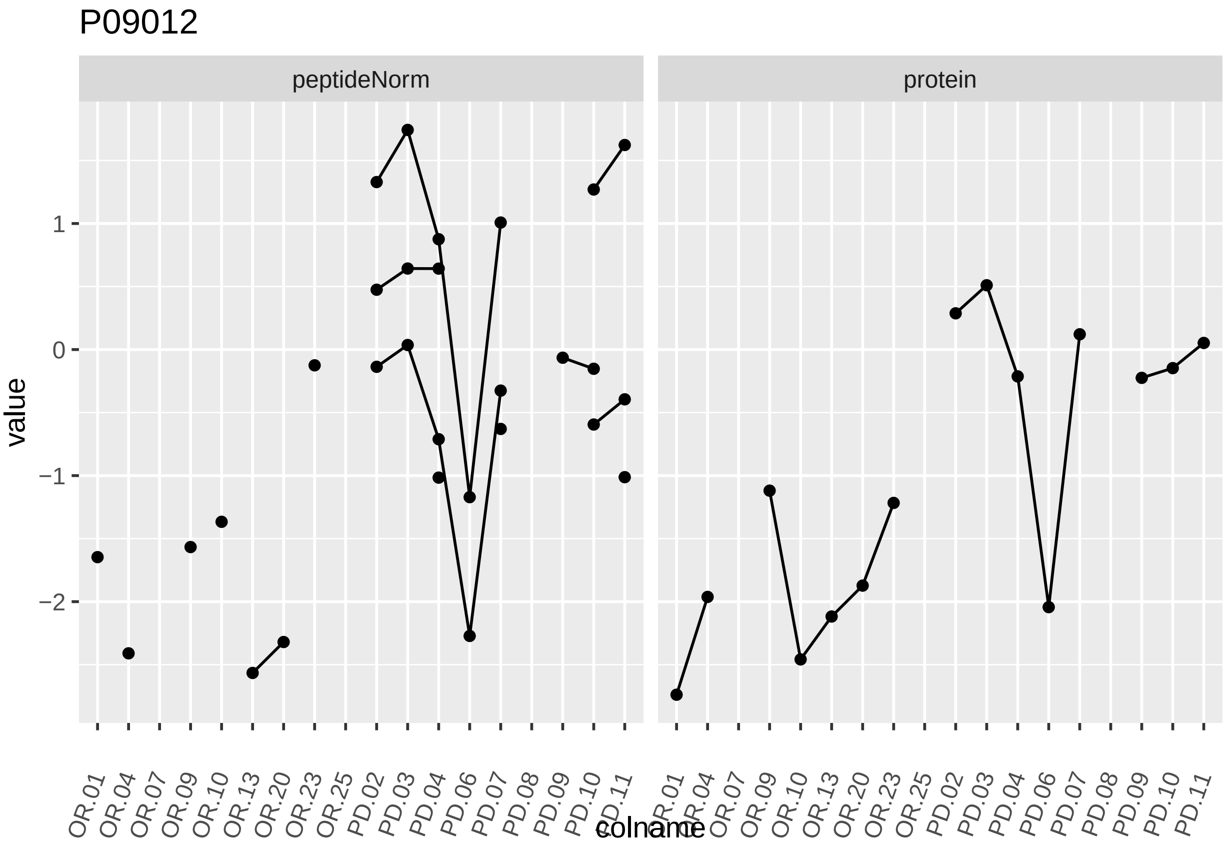
1.0
0.5
0.0
−0.5
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11


O60635
peptideNorm
protein
peptide intensity (log2)
2.0
1.5
1.0
0.5
0.0
−0.5
sample
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
prognosis
OR
PD
rowname
O60635
VEGCFNQLLYDIR


P09012
peptideNorm
protein
value
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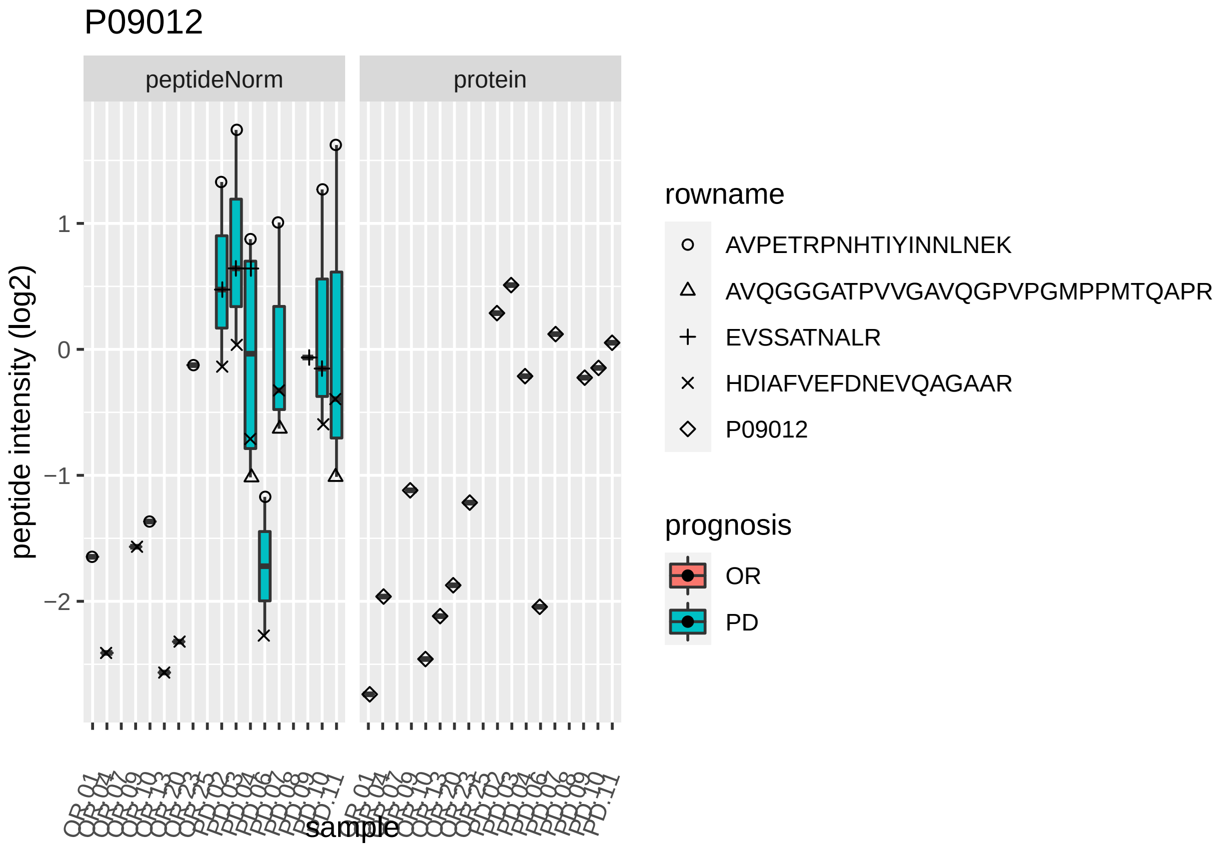
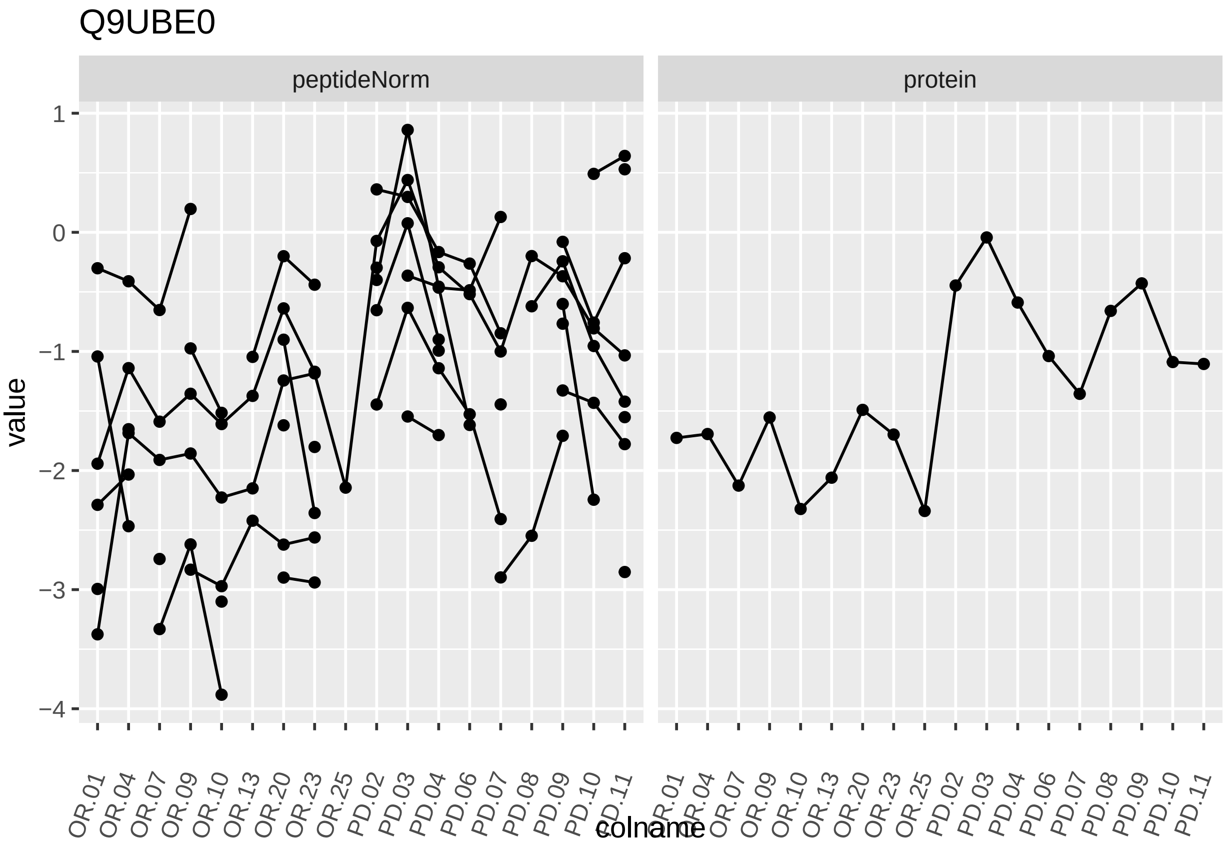
0
−1
−2
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11


P09012
peptideNorm
protein
peptide intensity (log2)
1
0
−1
−2
sample
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.21
OR.23
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
rowname
○ AVPETRPNHTIYINNLNEK
△ AVQGGGATPVVGAVQGPVPGMPPMTQAPR
+ EVSSATNALR
× HDIAFVEFDNEVQAGAAR
◇ P09012
prognosis
OR
PD


Q9UBE0
peptideNorm
protein
value
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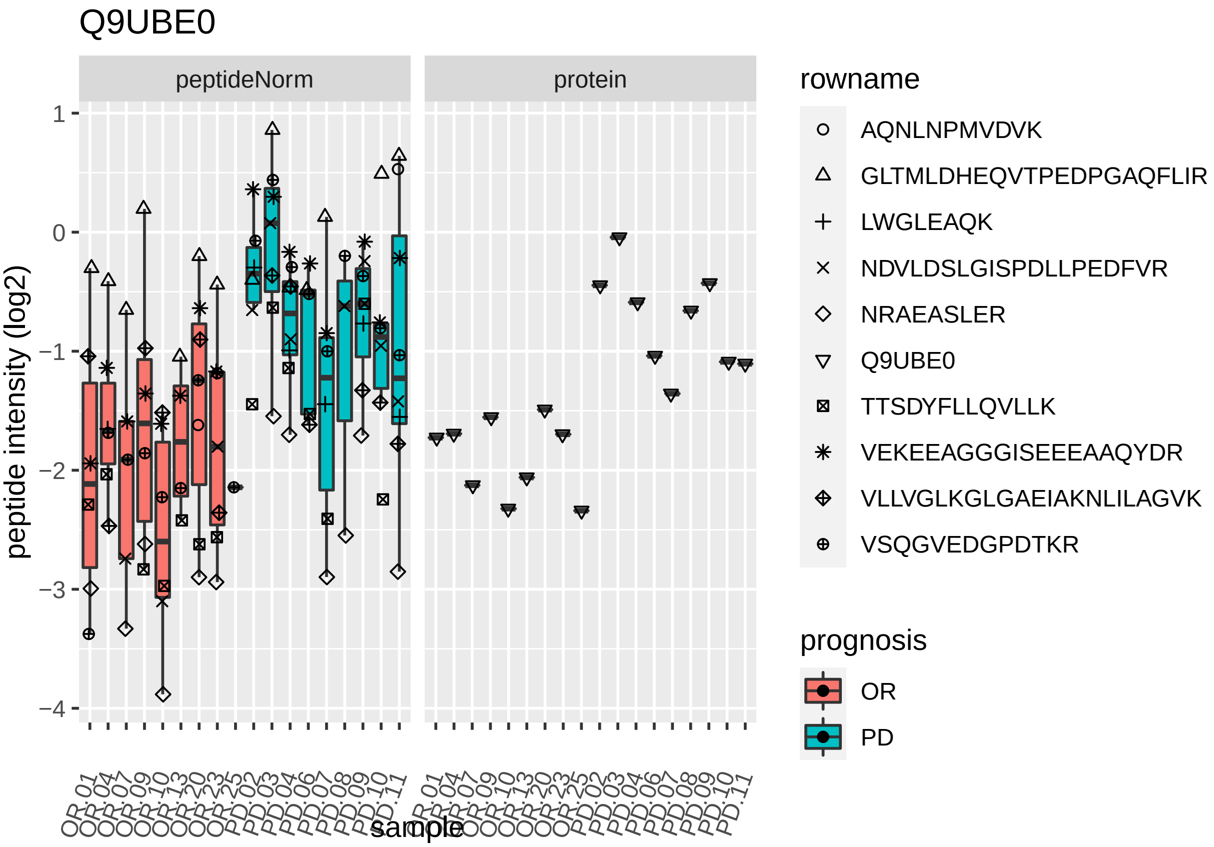
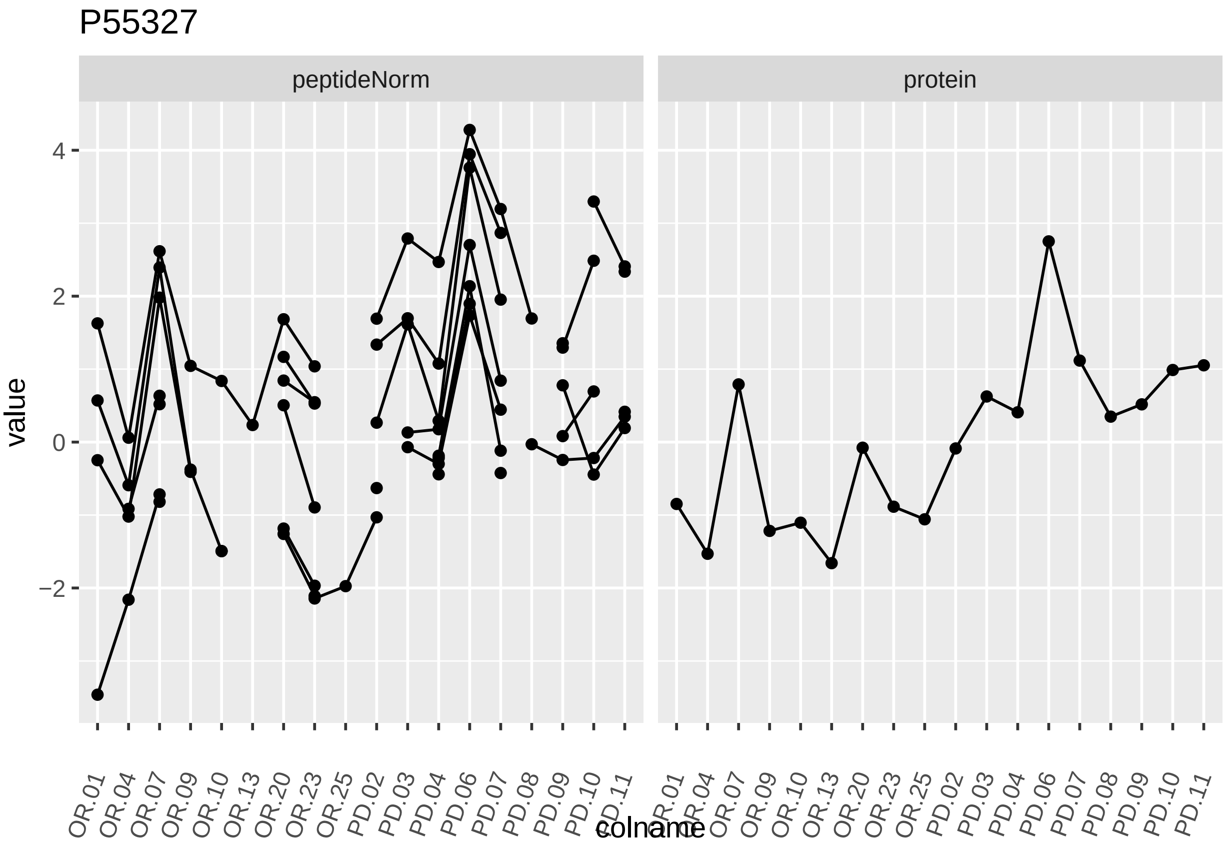
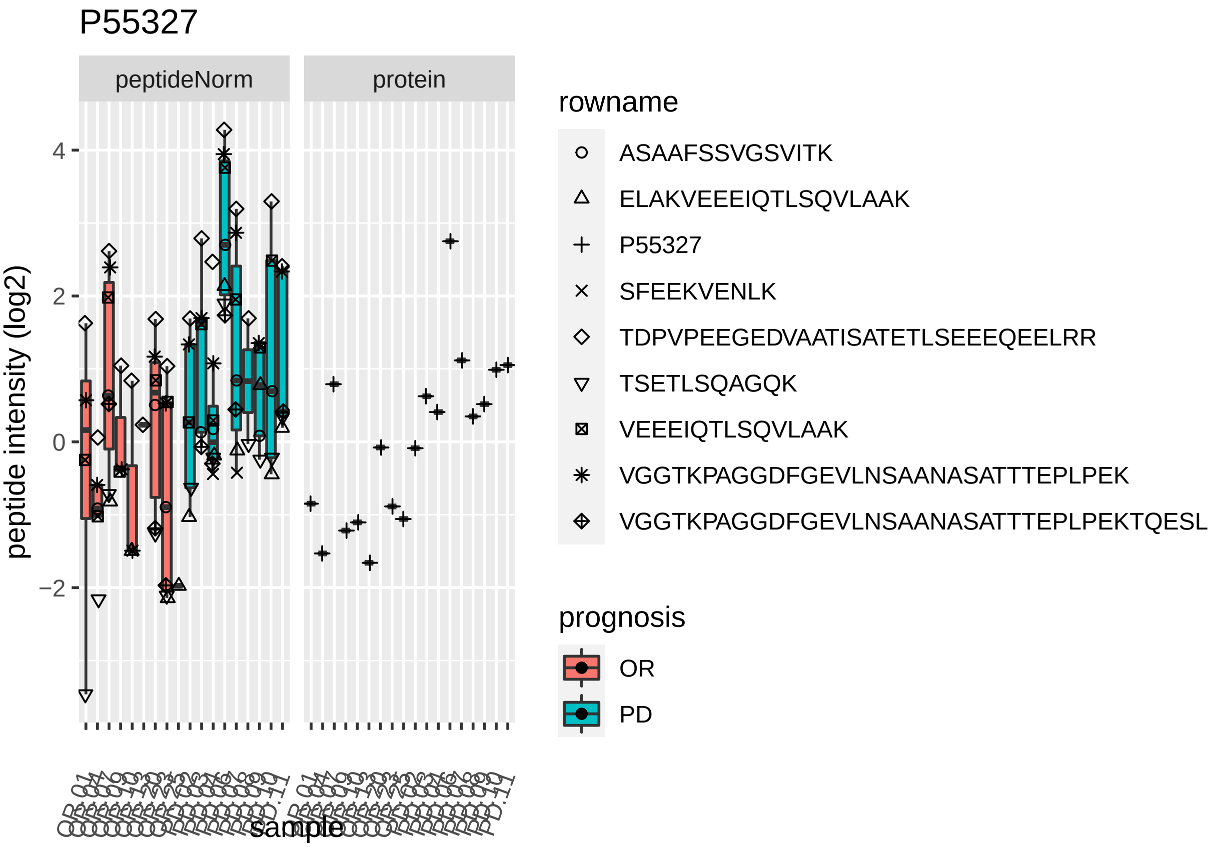
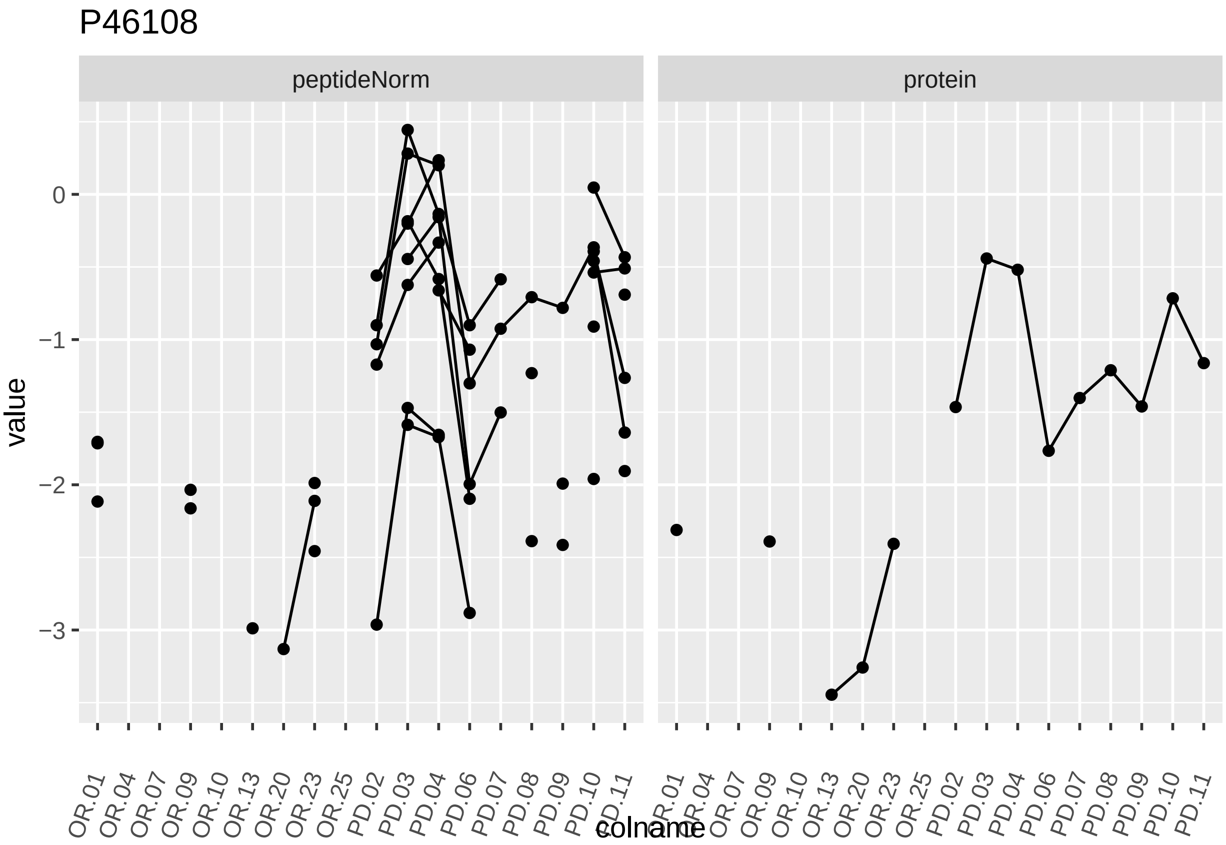
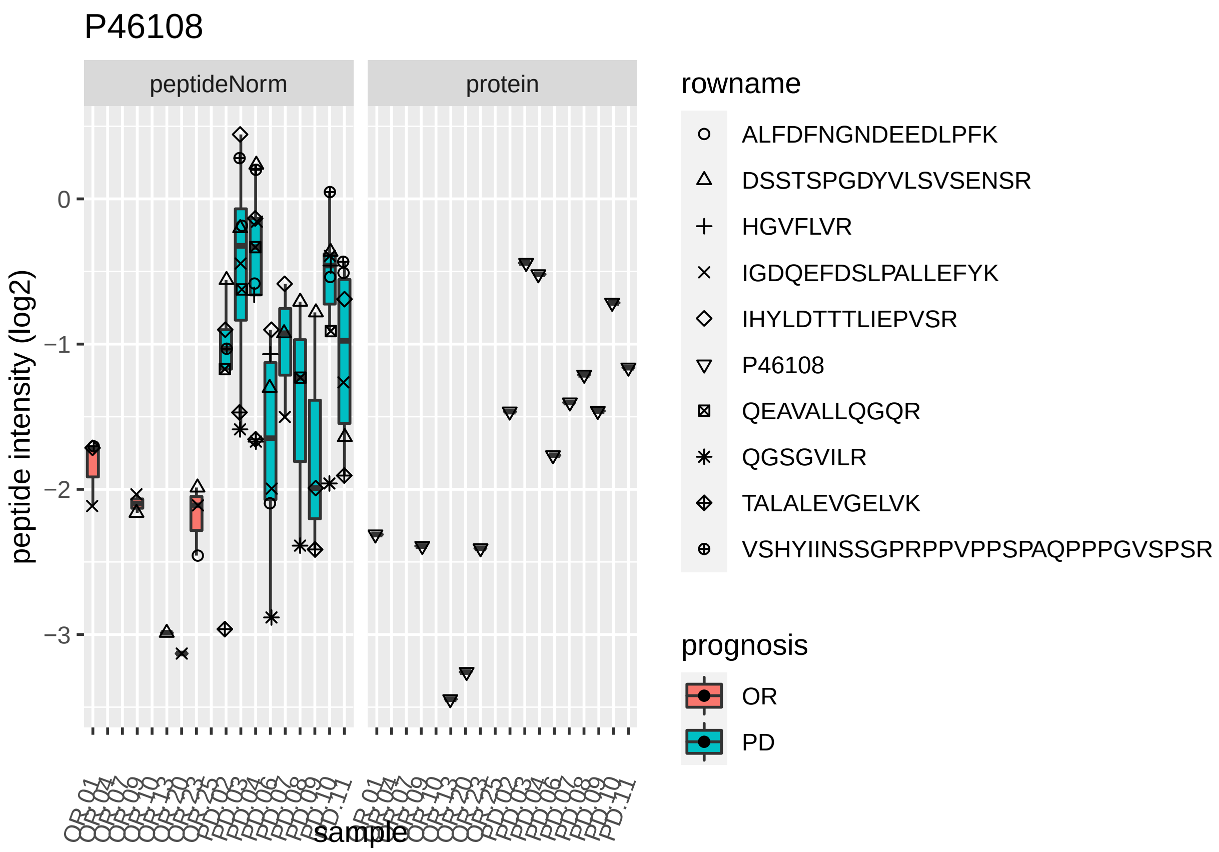
0
−1
−2
−3
−4
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
colname

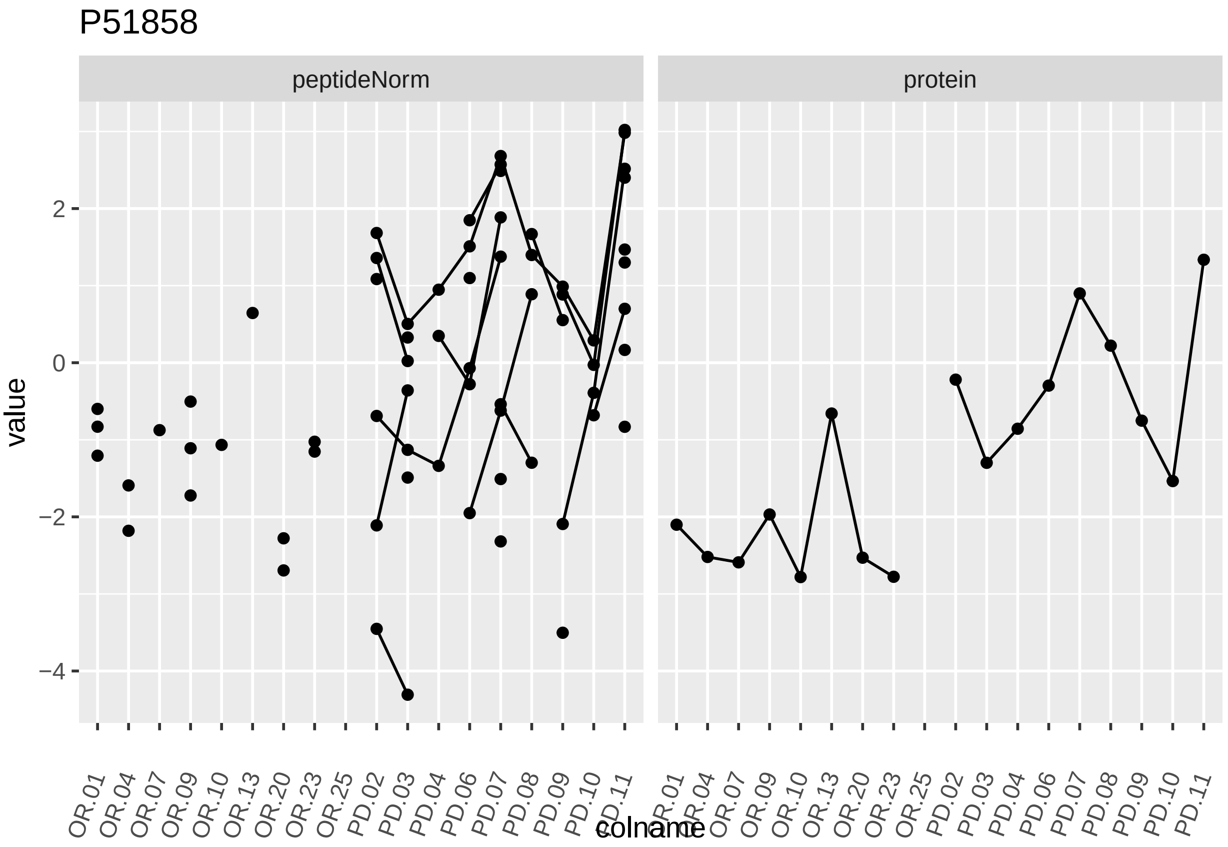

Q9UBE0
peptideNorm
protein
peptide intensity (log2)
1
0
−1
−2
−3
−4
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
sample
rowname
AQNLNPMVDVK
GLTMLDHEQVTPEDPGAQFLIR
LWGLEAQK
NDVLDSLGISPDLLPEDFVR
NRAEASLER
Q9UBE0
TTSDYFLLQVLLK
VEKEEAGGGISEEEAAQYDR
VLLVGLKGLGAEIAKNLILAGVK
VSQGVEDGPDTKR
prognosis
OR
PD

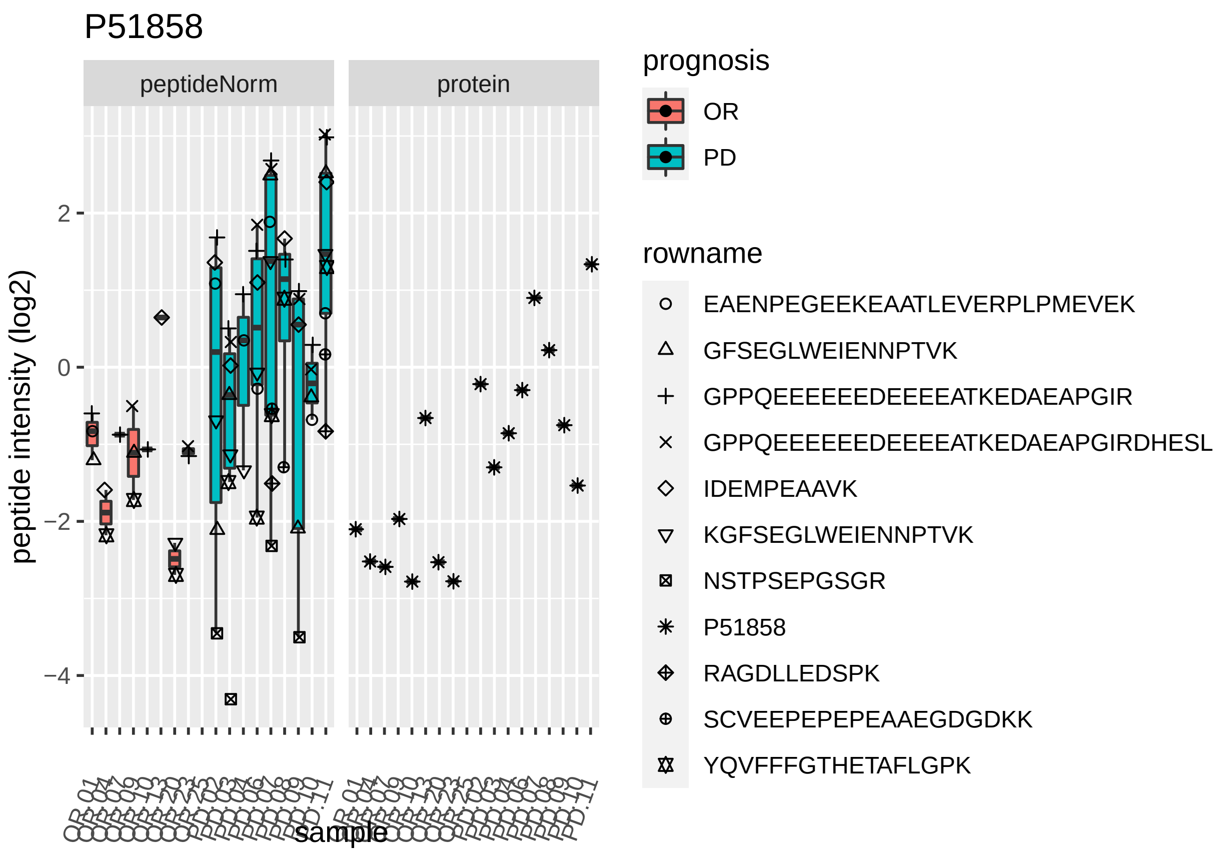

P55327
peptideNorm
protein
value
4
2
0
−2
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

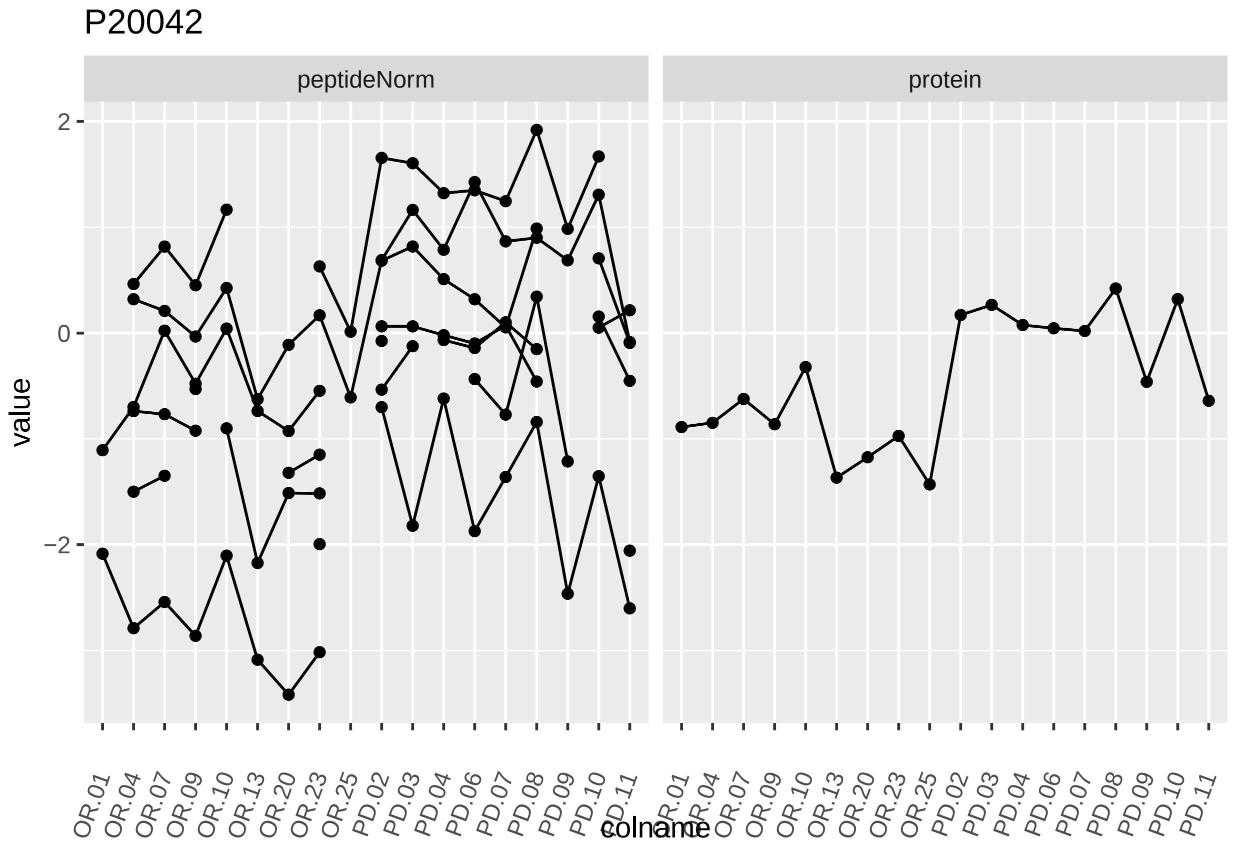

P55327
peptideNorm
protein
4
2
0
−2
peptide intensity (log2)
sample
rowname
○ ASAAFSSVGSVITK
△ ELAKVEEEIQTLSQVLAAK
+ P55327
× SFEEKVENLK
◇ TDPVPEEGEDVAATISATETLSEEEQEELRR
▽ TSETLSQAGQK
⊠ VEEEIQTLSQVLAAK
✳ VGGTKPAGGDFGEVLNSAANASATTTEPLPEK
◈ VGGTKPAGGDFGEVLNSAANASATTTEPLPEKTQESL
prognosis
🟥 OR
🟦 PD

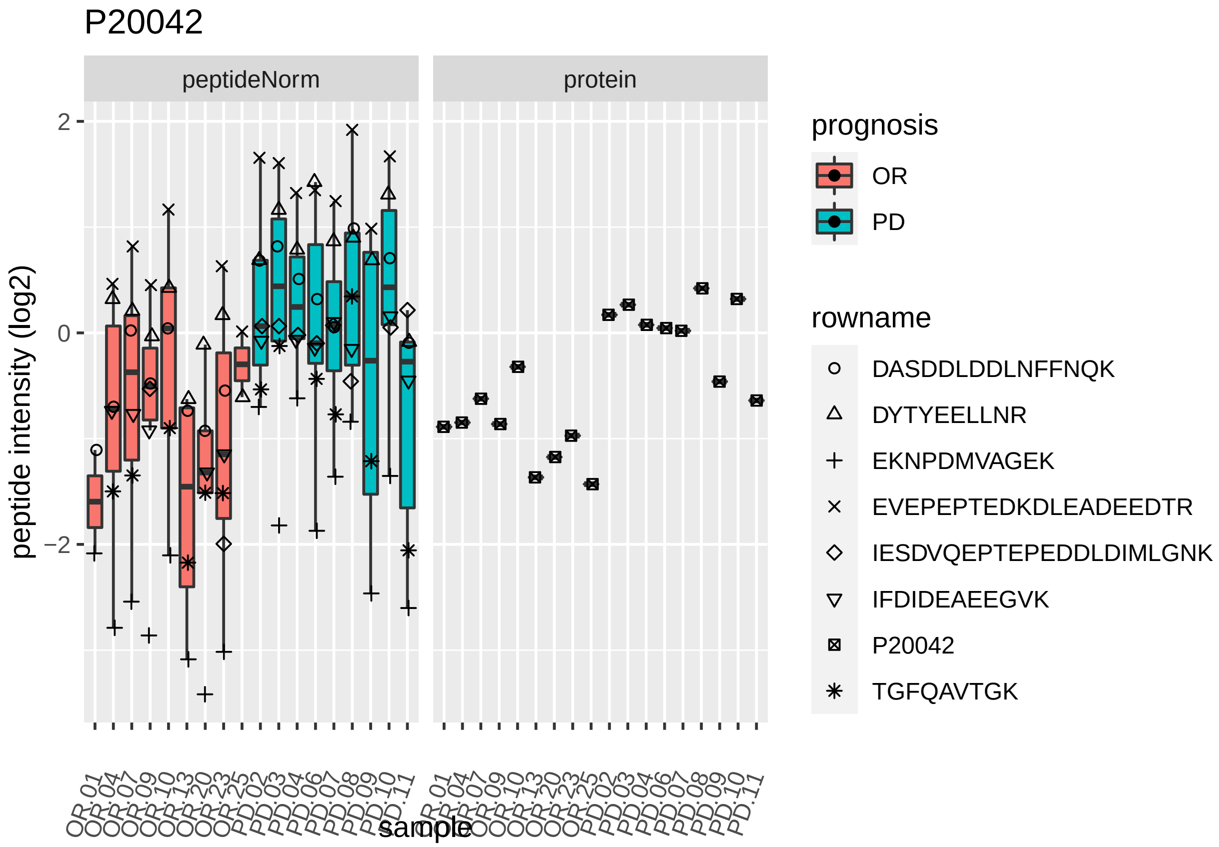

P46108
peptideNorm
protein
value
0
−1
−2
−3
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

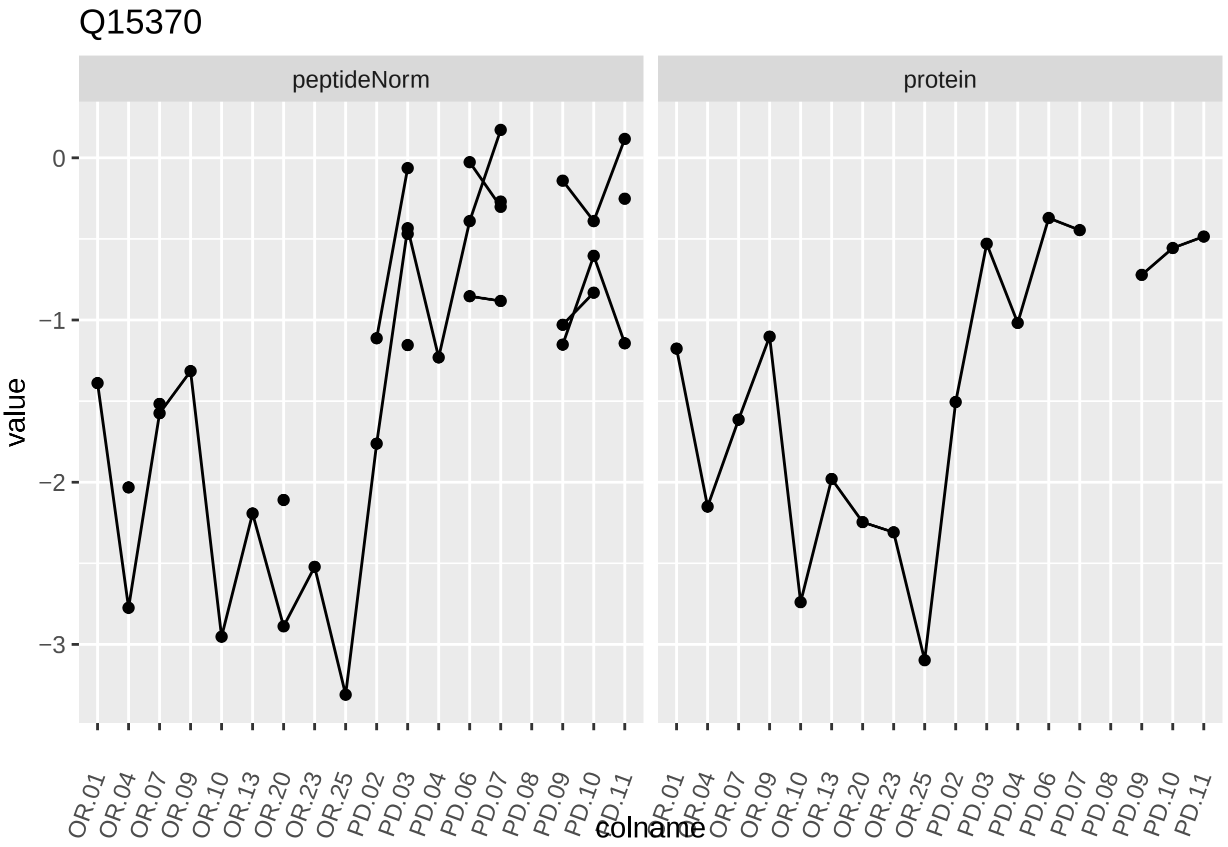

P46108
peptideNorm
protein
peptide intensity (log2)
0
−1
−2
−3
sample
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.21
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
rowname
○ ALFDFNGNDEEDLPFK
△ DSSTSPGDYVLSVSENSR
+ HGVFLVR
× IGDQEFDSLPALLEFYK
◇ IHYLDTTTLIEPVSR
▽ P46108
⊠ QEAVALLQGQR
✳ QGSGVILR
◈ TALALEVGELVK
⊕ VSHYIINSSGPRPPVPPSPAQPPPGVSPSR
prognosis
OR
PD

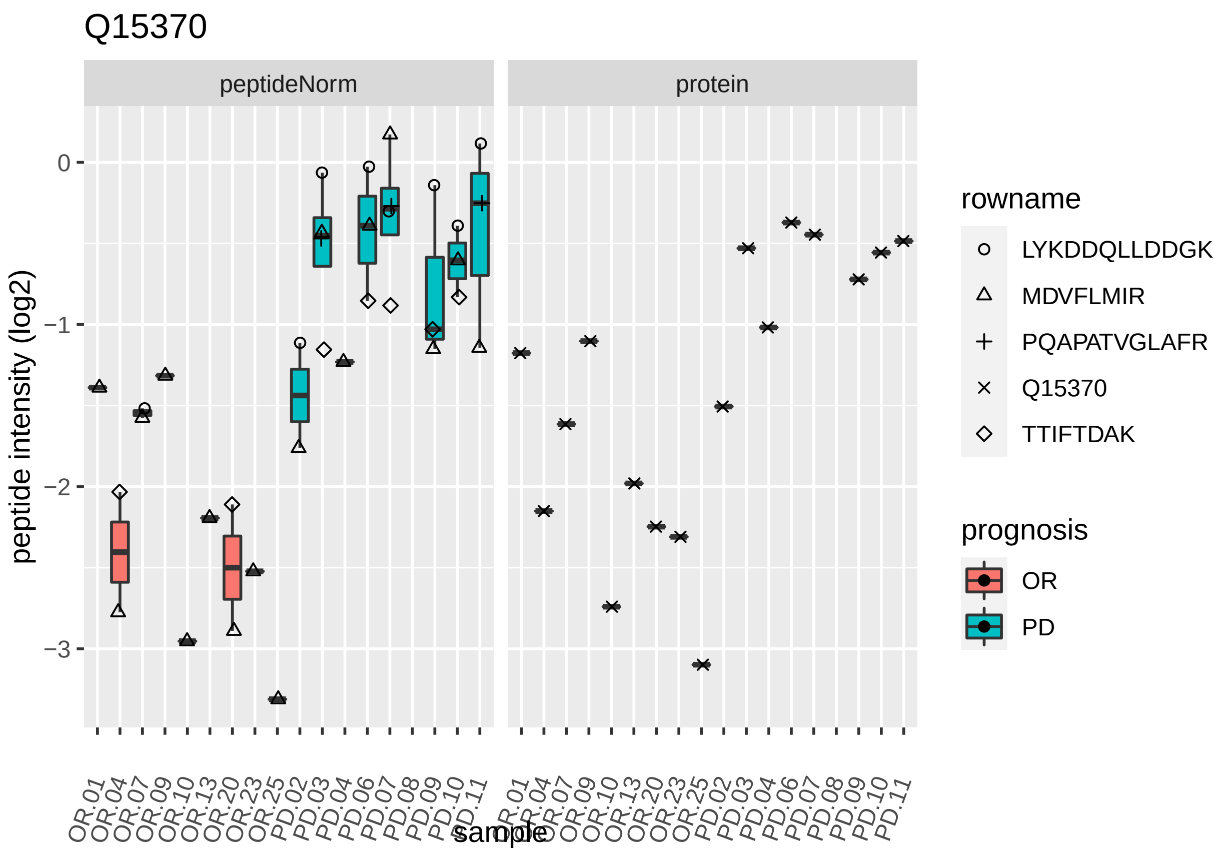

P51858
peptideNorm
protein
value
2
0
−2
−4
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

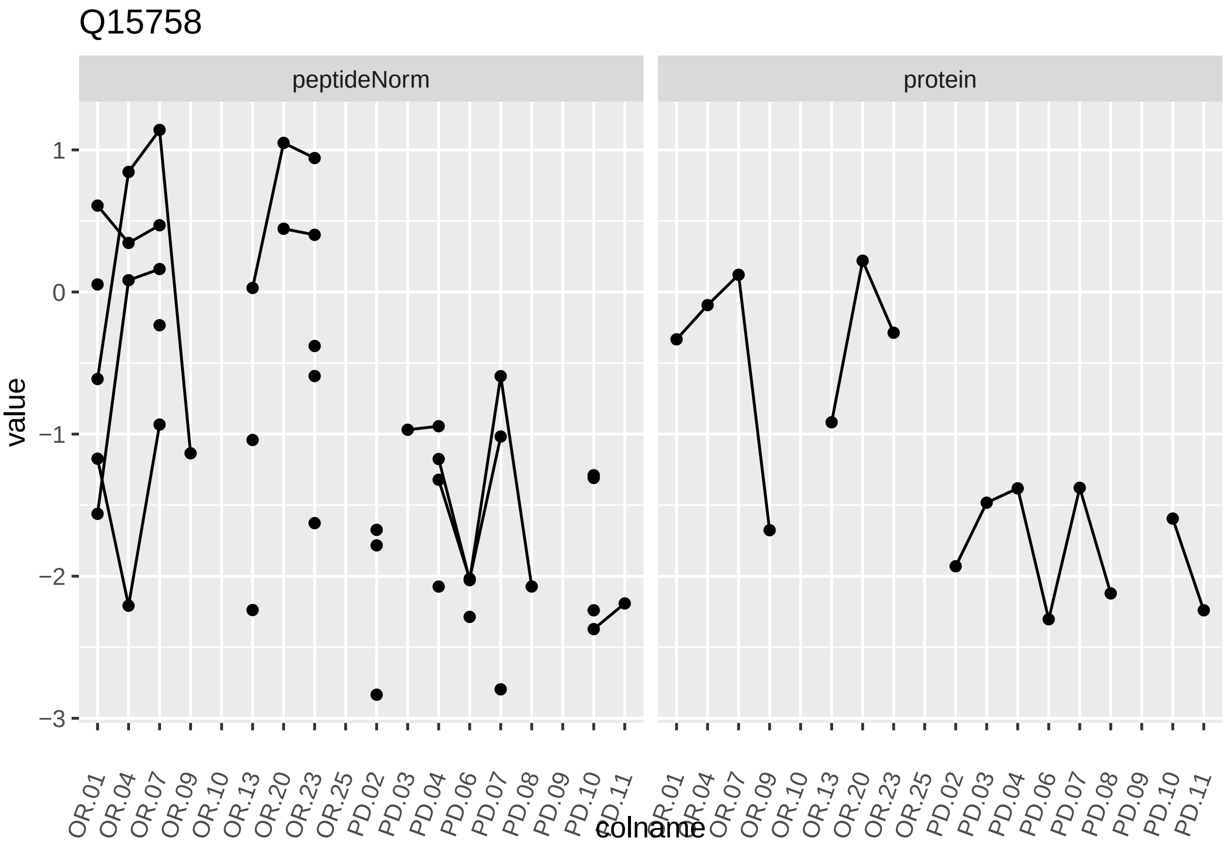

P51858
peptideNorm
protein
peptide intensity (log2)
2
0
−2
−4
OR.01
PD.11
OR.01
PD.11
sample
prognosis
OR
PD
rowname
EAENPEGEEKEAATLEVERPLPMEVEK
GFSEGLWEIENNPTVK
GPPQEEEEEEDEEEEATKEDAEAPGIR
GPPQEEEEEEDEEEEATKEDAEAPGIRDHESL
IDEMPEAAVK
KGFSEGLWEIENNPTVK
NSTPSEPGSGR
P51858
RAGDLLEDSPK
SCVEEPEPEPEAAEGDGDKK
YQVFFFGTHETAFLGPK

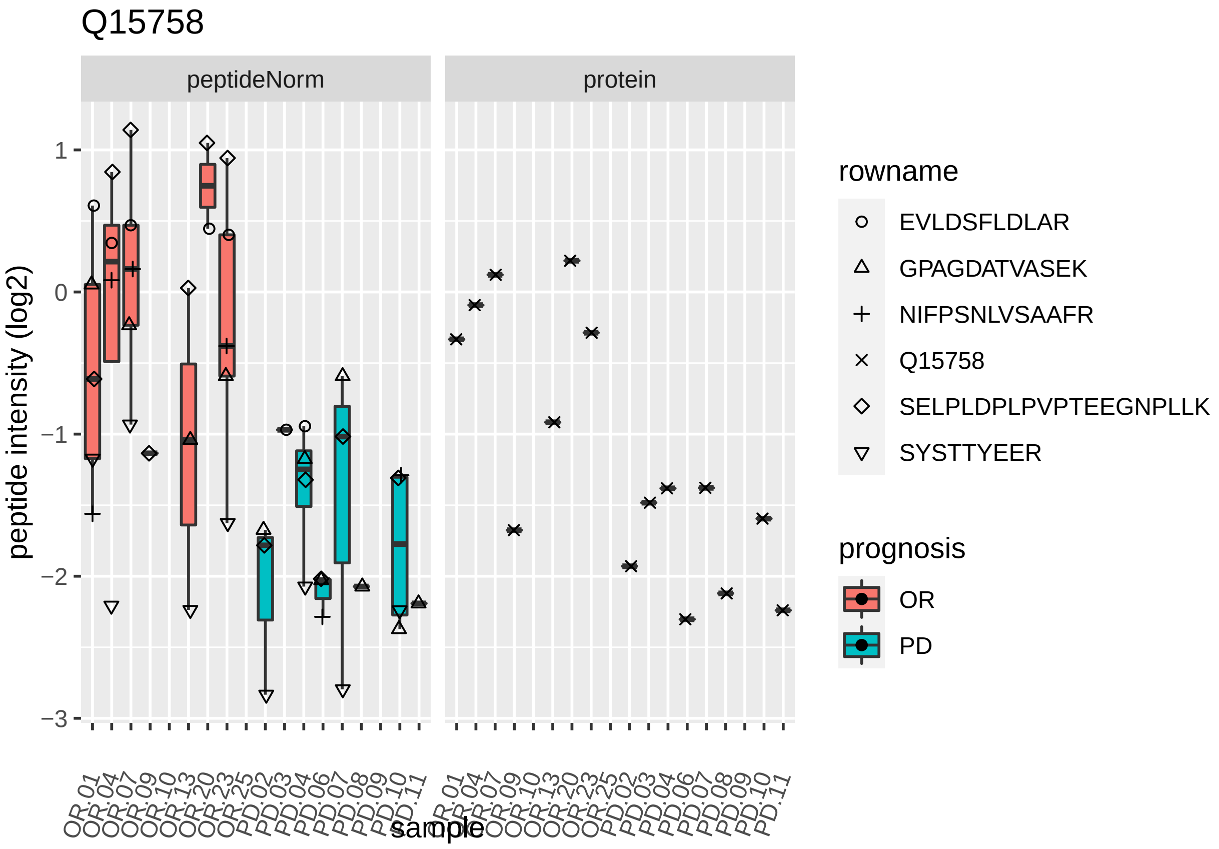

P20042
peptideNorm
protein
value
2
0
−2
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

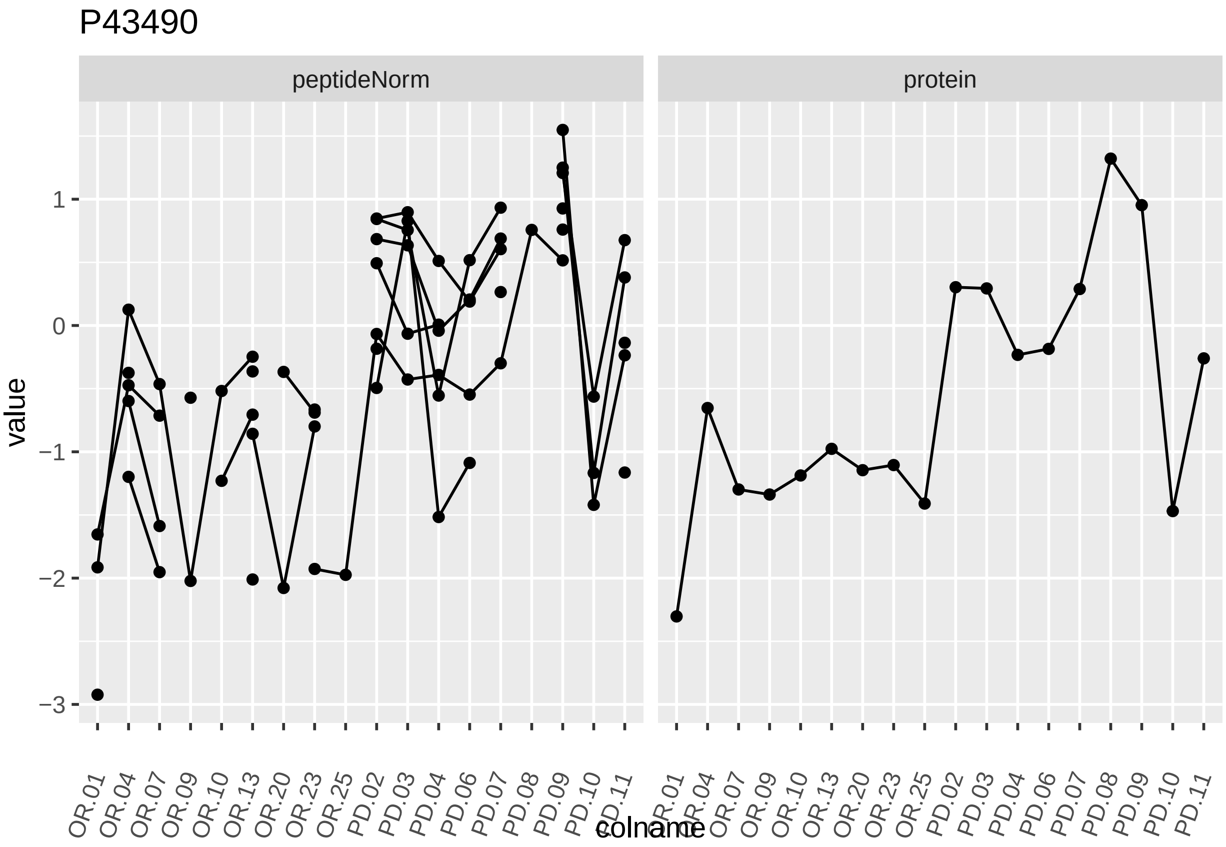

P20042
peptideNorm
protein
peptide intensity (log2)
2
0
−2
sample
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
prognosis
OR
PD
rowname
○ DASDDLDDLNFFNQK
△ DYTYEELLNR
+ EKNPDMVAGEK
× EVEPEPTEDKDLEADEEDTR
◇ IESDVQEPTEPEDDLDIMLGNK
▽ IFDIDEAEEGVK
⊠ P20042
✳ TGFQAVTGK

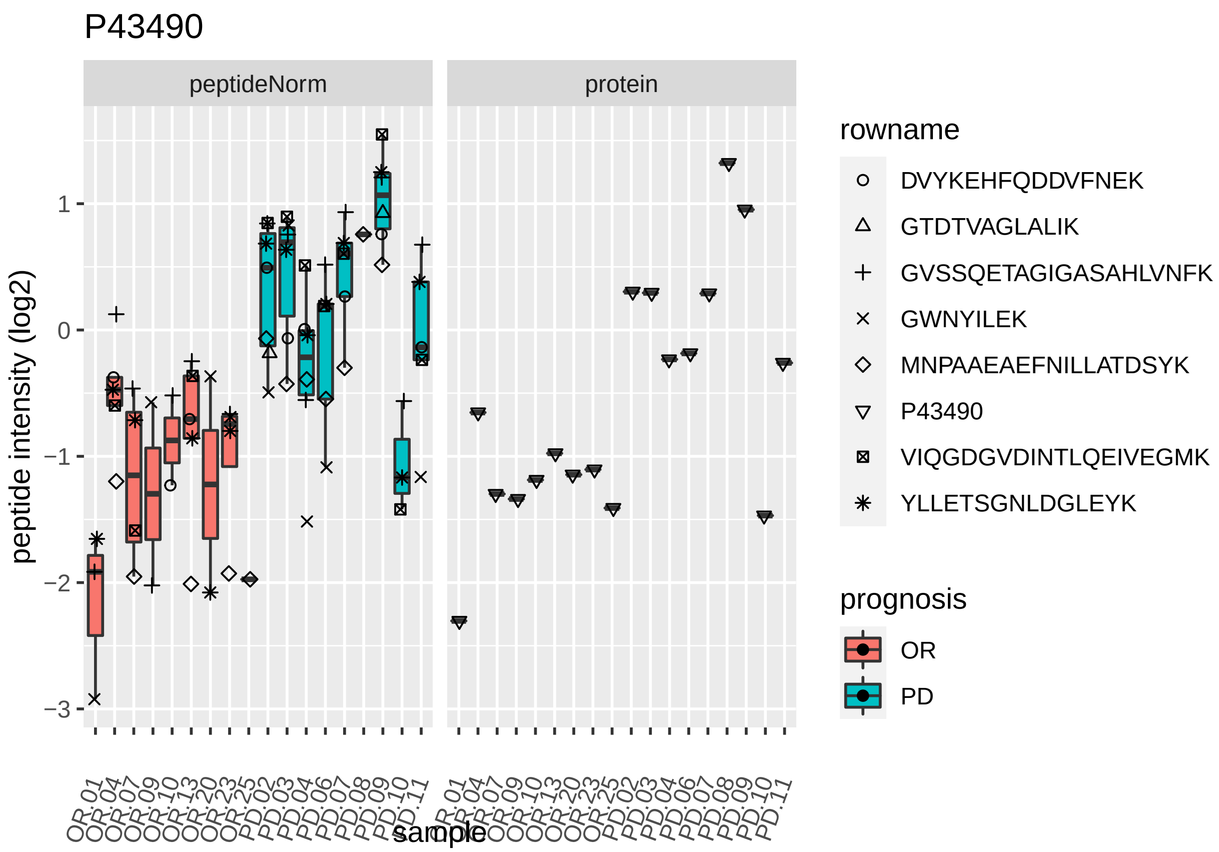

Q15370
peptideNorm
protein
value
0
−1
−2
−3
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

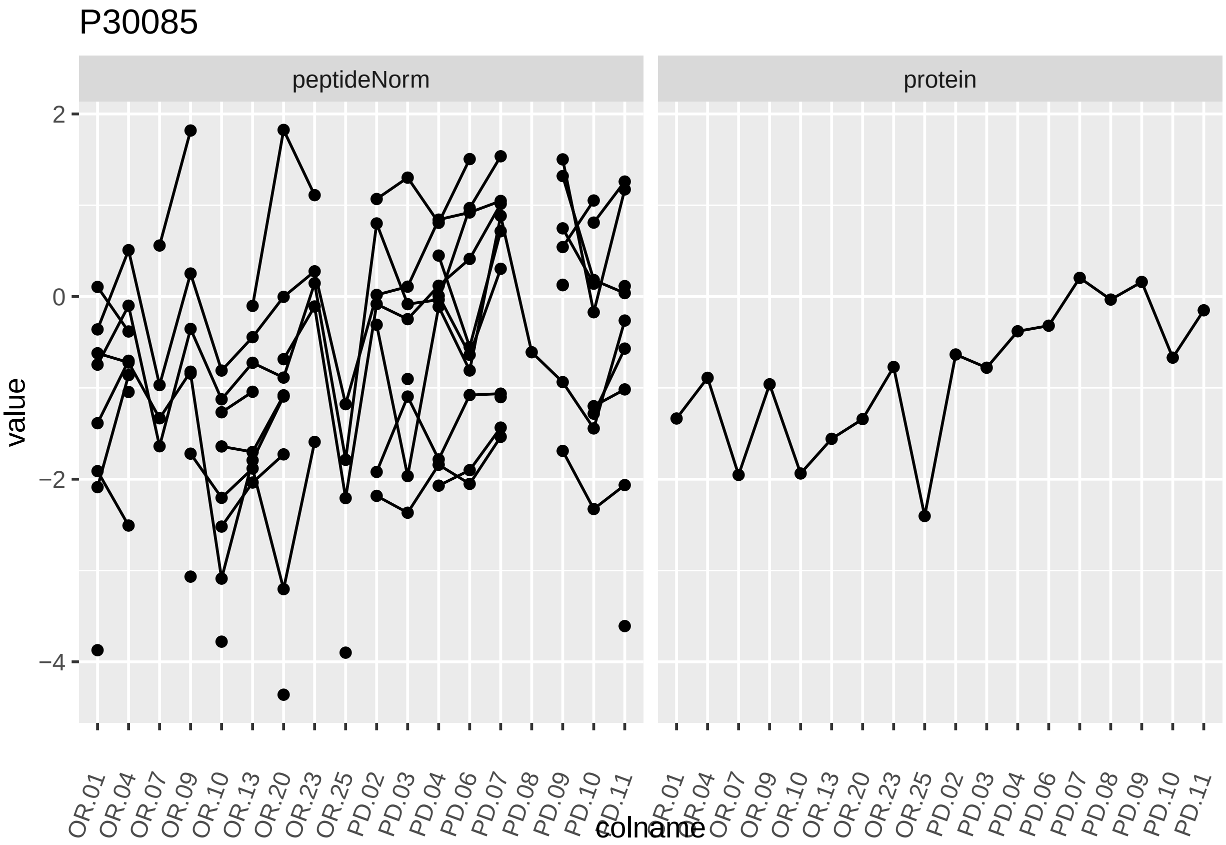

Q15370
peptideNorm
protein
peptide intensity (log2)
0
−1
−2
−3
sample
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
rowname
○ LYKDDQLLDDGK
△ MDVFLMIR
+ PQAPATVGLAFR
× Q15370
◇ TTIFTDAK
prognosis
🟥 OR
🟦 PD

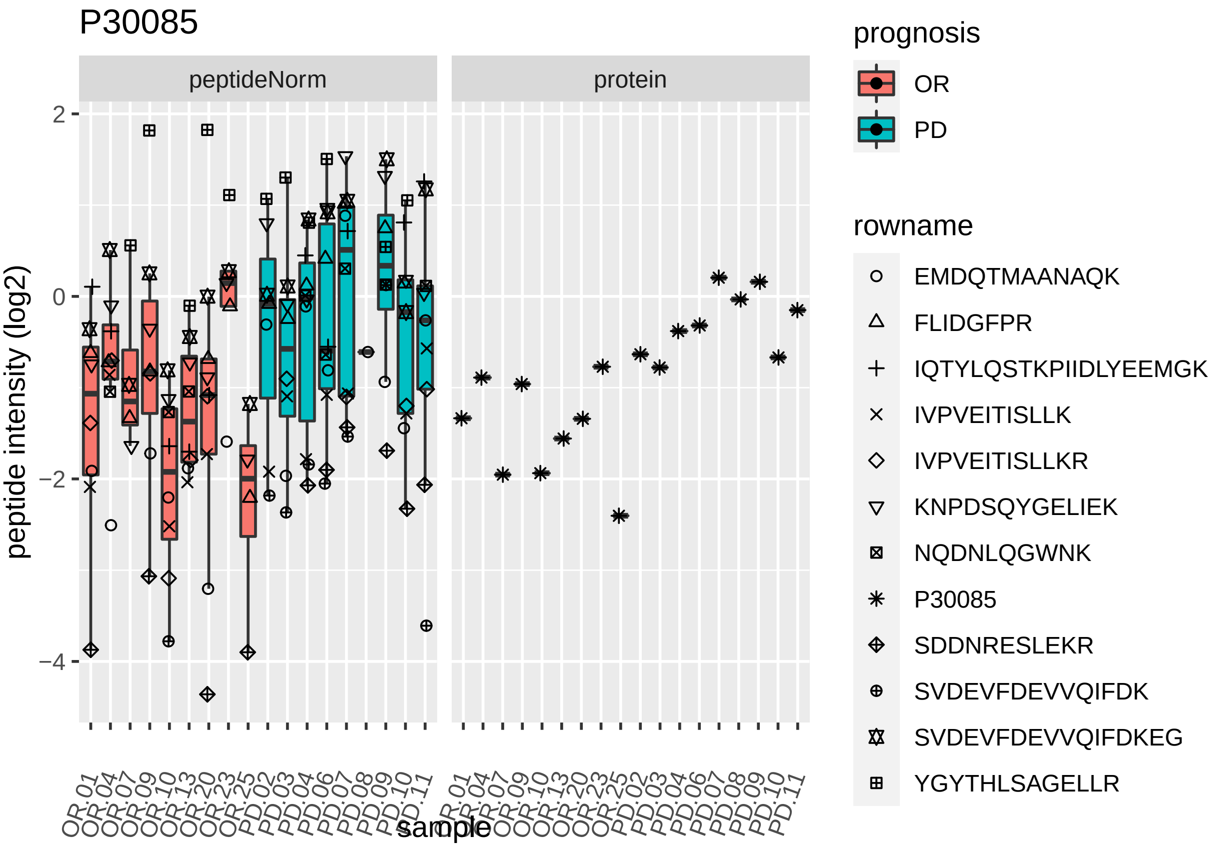

Q15758
peptideNorm
protein
value
1
0
−1
−2
−3
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

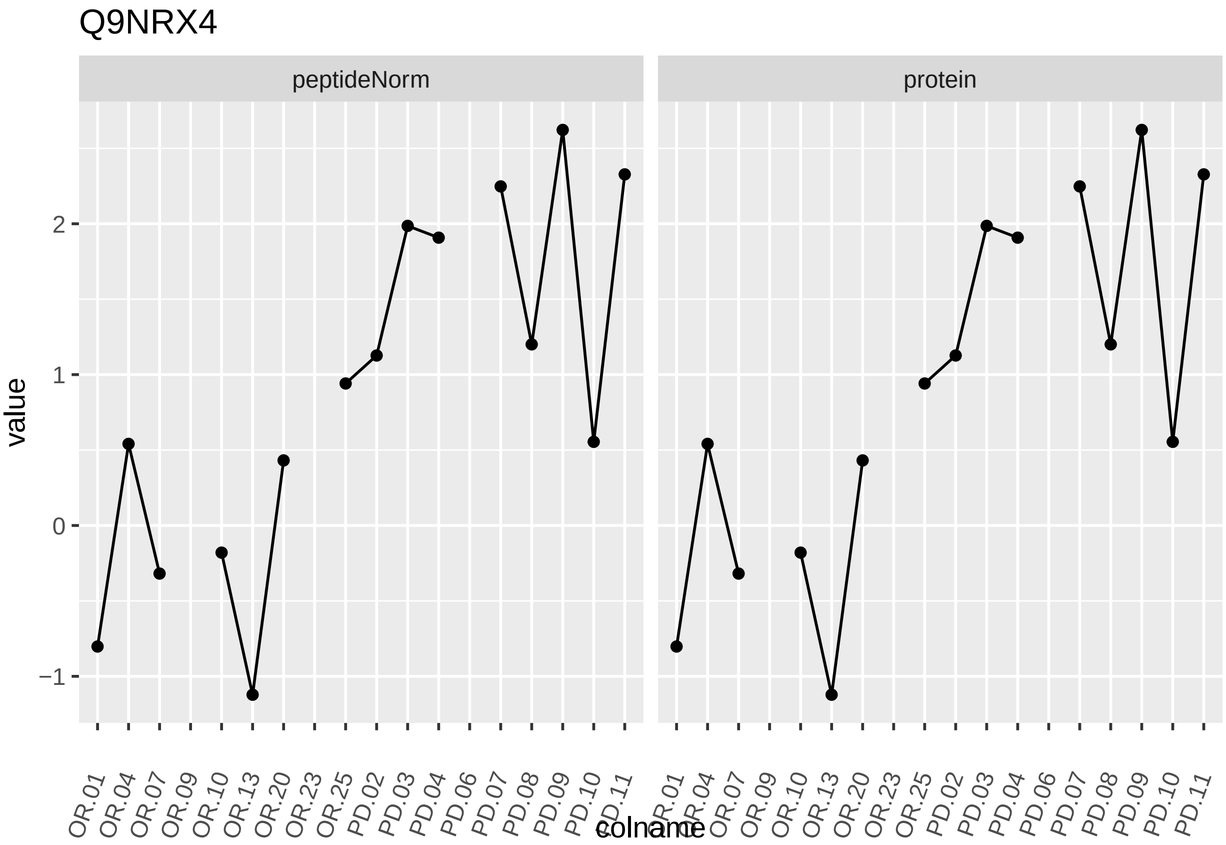

Q15758
peptideNorm
protein
peptide intensity (log2)
1
0
−1
−2
−3
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
sample
rowname
○ EVLDSFLDLAR
△ GPAGDATVASEK
+ NIFPSNLVSAAFR
× Q15758
◇ SELPLDPLPVPTEEGNPLLK
▽ SYSTTYEER
prognosis
🟥 OR
🟦 PD

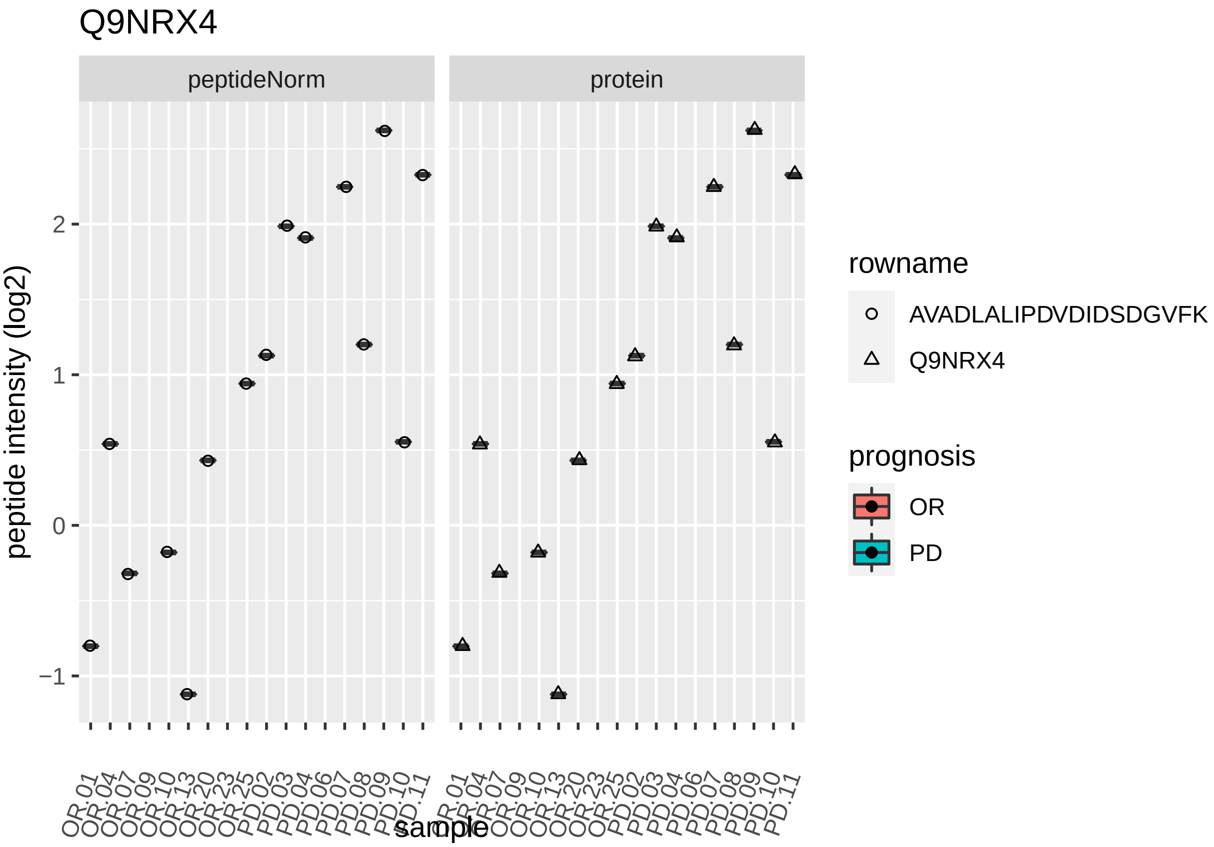

P43490
peptideNorm
protein
value
1
0
−1
−2
−3
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

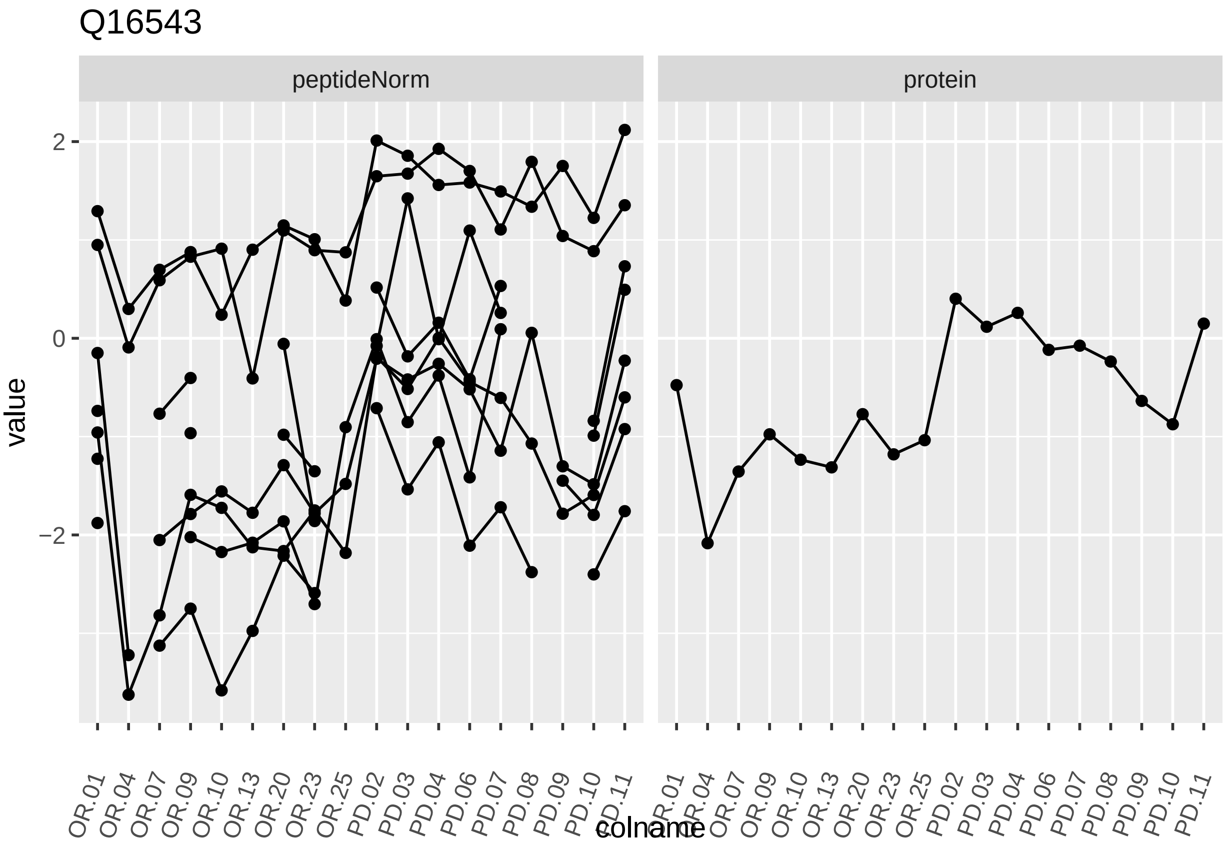

P43490
peptideNorm
protein
peptide intensity (log2)
1
0
−1
−2
−3
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
sample
rowname
○ DVYKEHFQDDVFNEK
△ GTDTVAGLALIK
+ GVSSQETAGIGASAHLVNFK
× GWNYILEK
◇ MNPAAEAEFNILLATDSYK
▽ P43490
⊠ VIQGDGVDINTLQEIVEGMK
✳ YLLETSGNLDGLEYK
prognosis
OR
PD

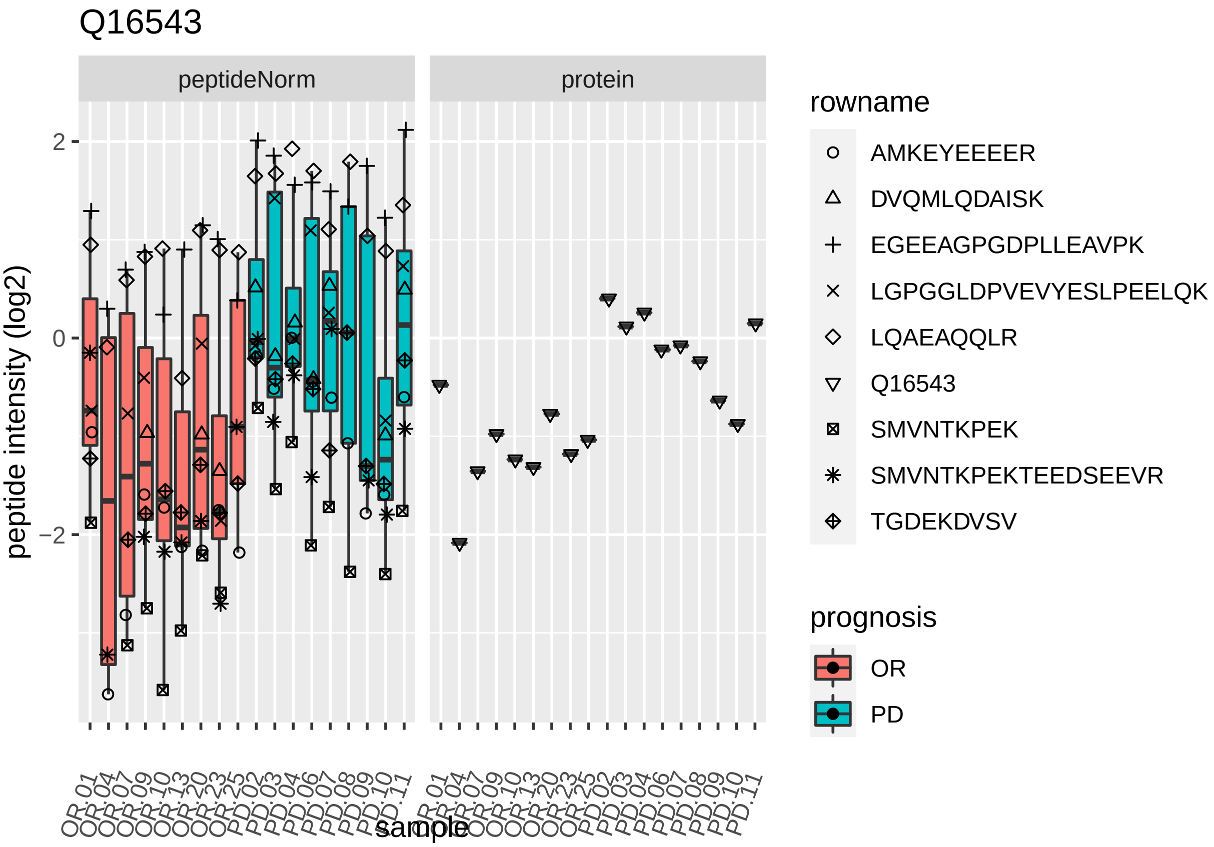

P30085
peptideNorm
protein
value
2
0
−2
−4
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

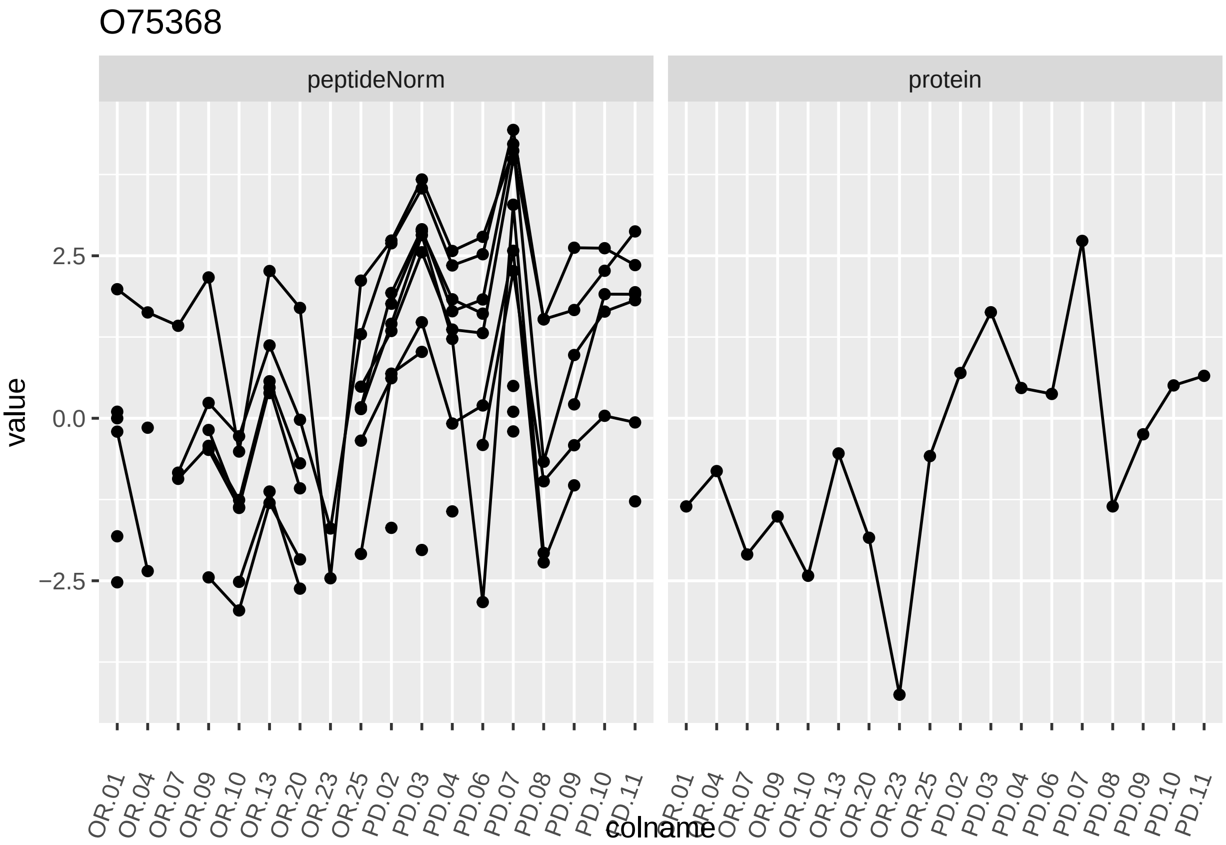

P30085
peptideNorm
protein
peptide intensity (log2)
2
0
−2
−4
sample
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
prognosis
OR
PD
rowname
EMDQTMAANAQK
FLIDGFPR
IQTYLQSTKPIIDLYEEMGK
IVPVEITISLLK
IVPVEITISLLKR
KNPDSQYGELIEK
NQDNLQGWNK
P30085
SDDNRESLEKR
SVDEVFDEVVQIFDK
SVDEVFDEVVQIFDKEG
YGYTHLSAGELLR

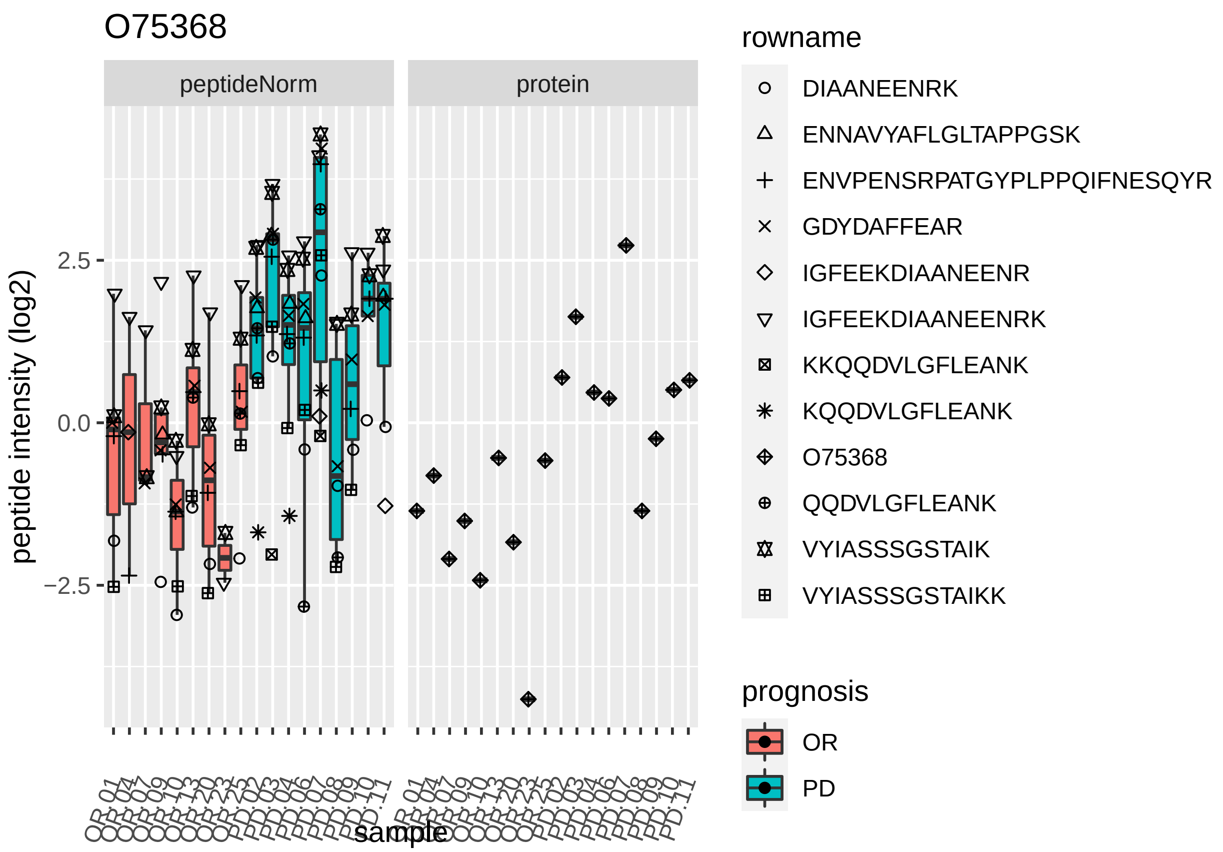

Q9NRX4
peptideNorm
protein
value
2
1
0
−1
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
colname

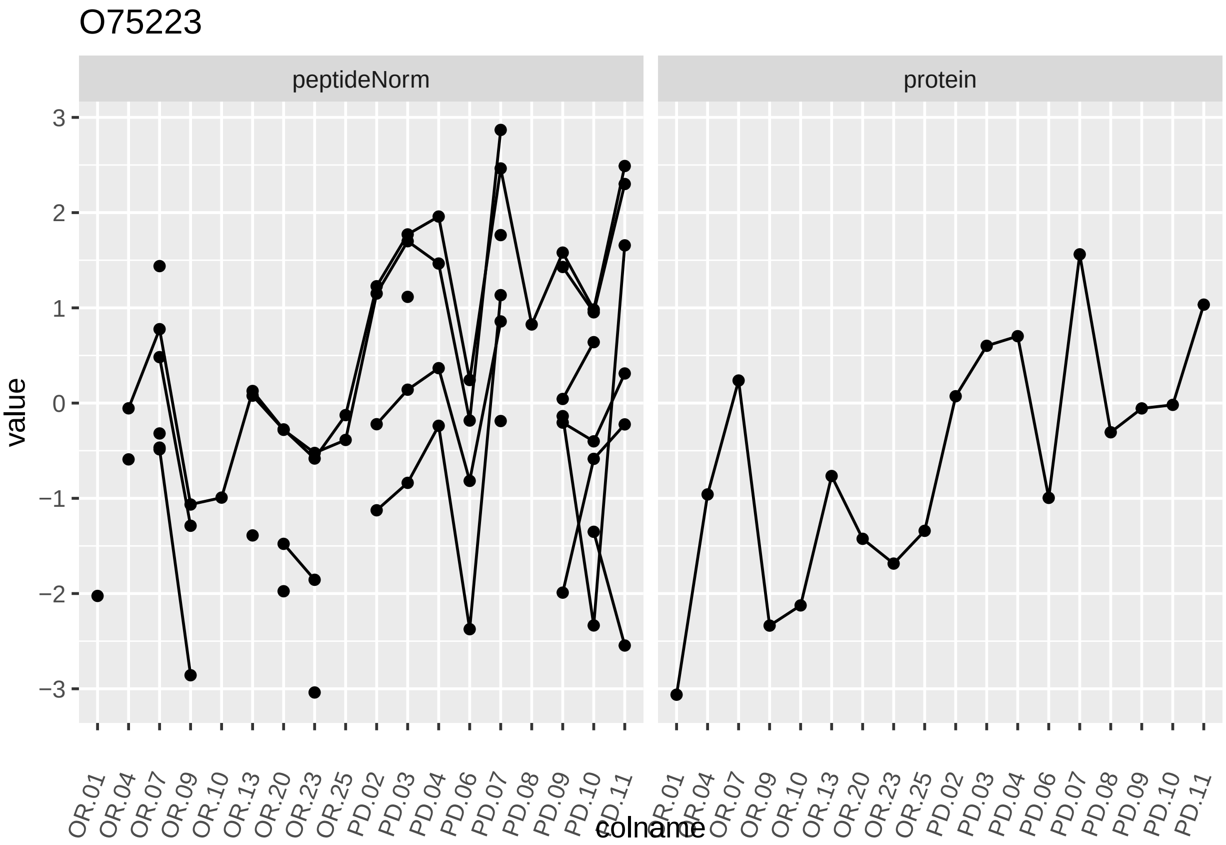

Q9NRX4
peptideNorm
protein
peptide intensity (log2)
2
1
0
−1
sample
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
rowname
AVADLALIPDVDIDSDGVFK
Q9NRX4
prognosis
OR
PD

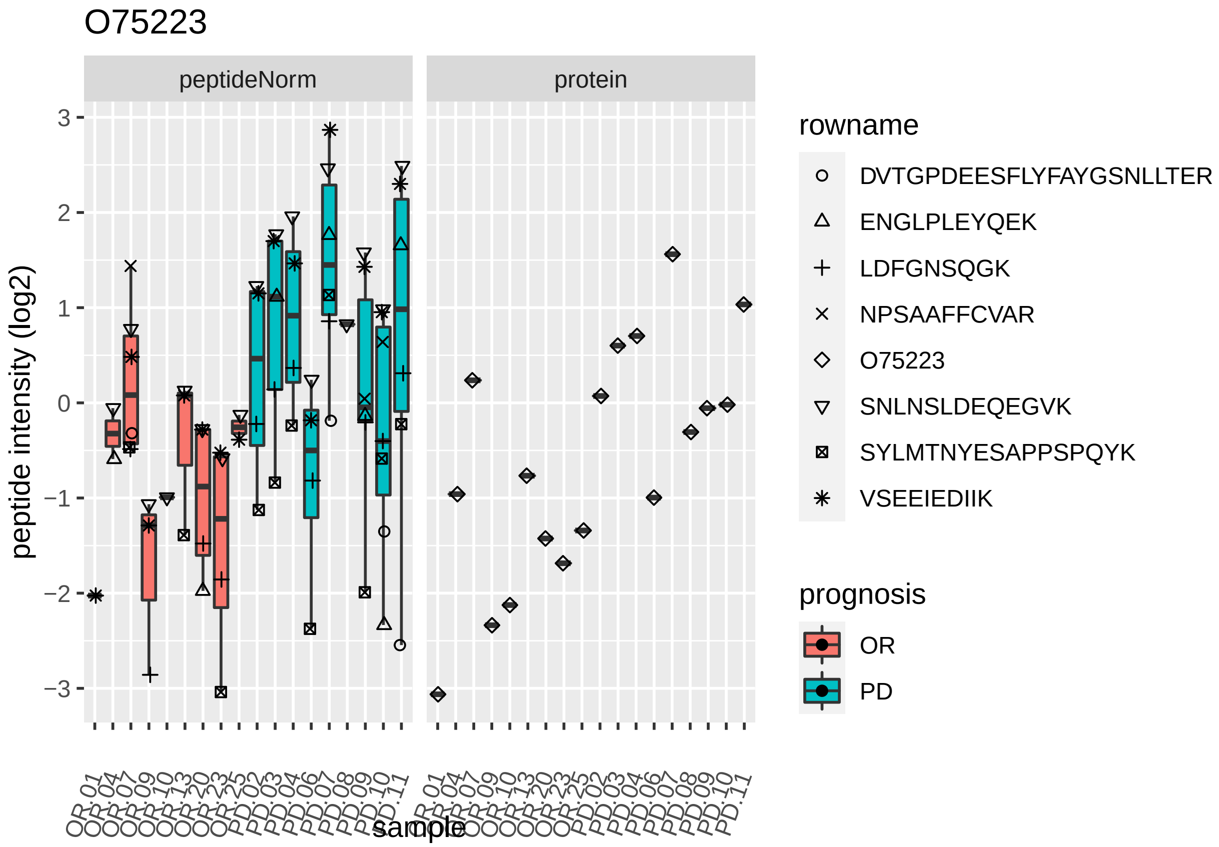

Q16543
peptideNorm
protein
value
2
0
−2
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

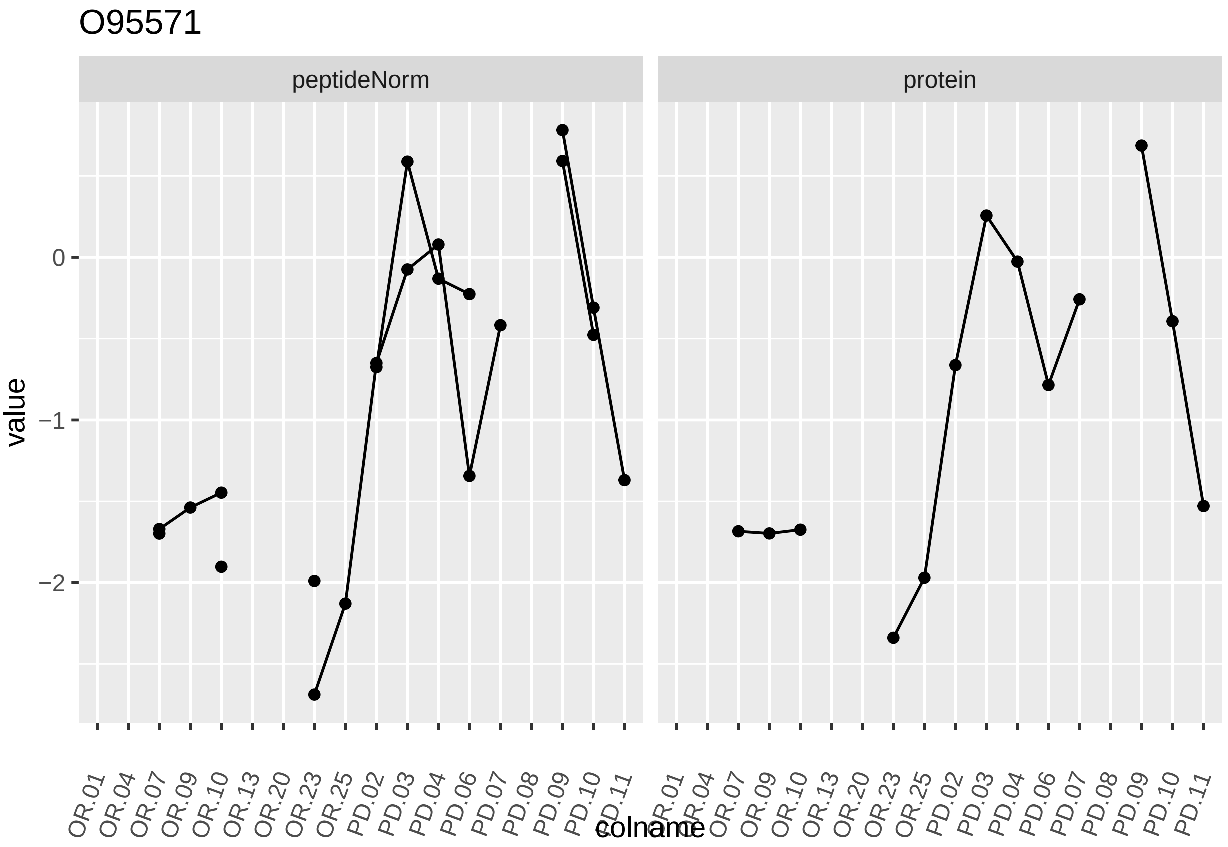

Q16543
peptideNorm
protein
peptide intensity (log2)
2
0
−2
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
sample
rowname
○ AMKEYEEEER
△ DVQMLQDAISK
+ EGEEAGPGDPLLEAVPK
× LGPGGLDPVEVYESLPEELQK
◇ LQAEAQQLR
▽ Q16543
⊠ SMVNTKPEK
✳ SMVNTKPEKTEEDSEEVR
⊕ TGDEKDVSV
prognosis
🟥 OR
🟦 PD

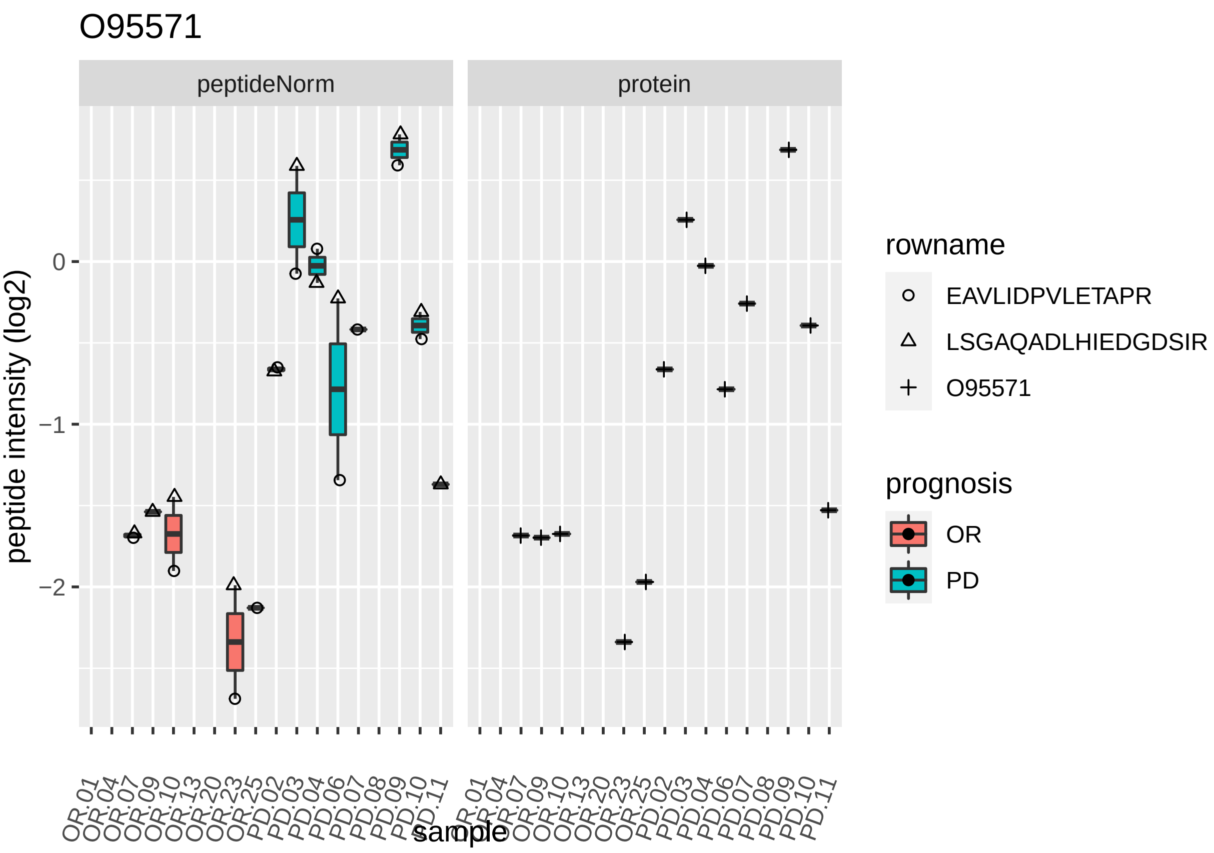

O75368
peptideNorm
protein
value
2.5
0.0
−2.5
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

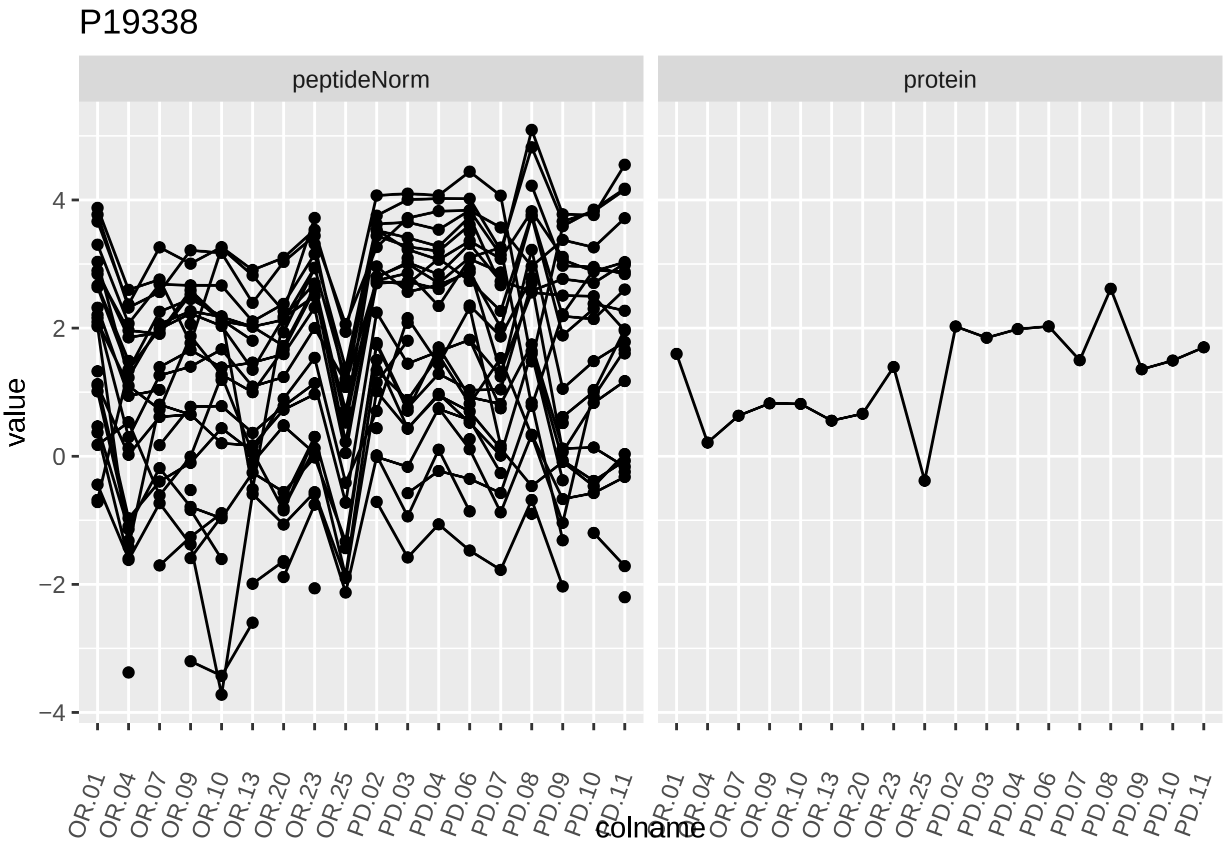

O75368
peptideNorm
protein
peptide intensity (log2)
2.5
0.0
−2.5
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
sample
rowname
DIAANEENRK
ENNAVYAFLGLTAPPGSK
ENVPENSRPATGYPLPPQIFNESQYR
GDYDAFFEAR
IGFEEKDIAANEENR
IGFEEKDIAANEENRK
KKQQDVLGFLEANK
KQQDVLGFLEANK
O75368
QQDVLGFLEANK
VYIASSSGSTAIK
VYIASSSGSTAIKK
prognosis
OR
PD

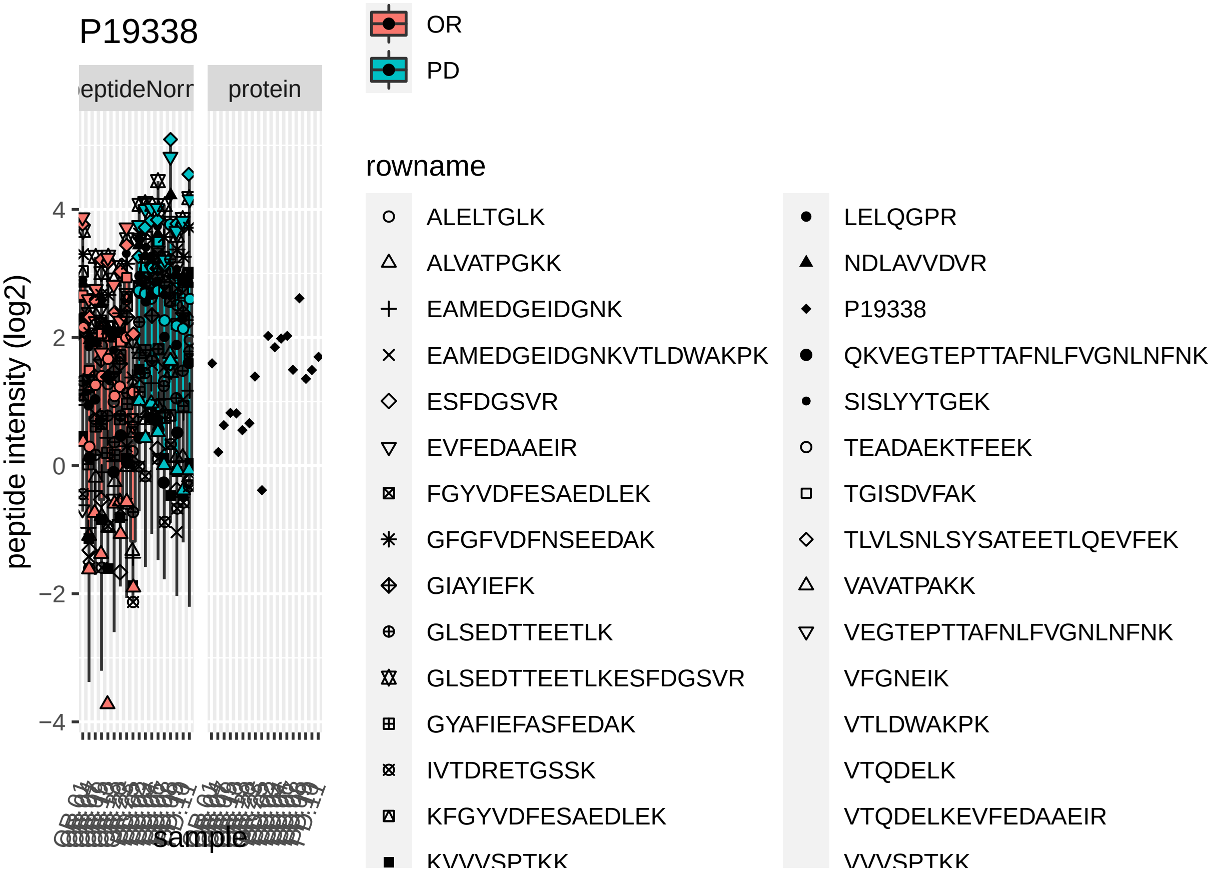

O75223
peptideNorm
protein
value
3
2
1
0
−1
−2
−3
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11


O75223
peptideNorm
protein
peptide intensity (log2)
3
2
1
0
−1
−2
−3
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
sample
rowname
○ DVTGPDEESFLYFAYGSNLLTER
△ ENGLPLEYQEK
+ LDFGNSQGK
× NPSAAFFCVAR
◇ O75223
▽ SNLNSLDEQEGVK
⊠ SYLMTNYESAPPSPQYK
✳ VSEEIEDIIK
prognosis
🟥 OR
🟦 PD


O95571
peptideNorm
protein
value
0
−1
−2
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11


O95571
peptideNorm
protein
peptide intensity (log2)
0
−1
−2
sample
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
rowname
EAVLIDPVLETAPR
LSGAQADLHIEDGDSIR
O95571
prognosis
OR
PD


P19338
peptideNorm
protein
value
4
2
0
−2
−4
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11


P19338
eptideNorr
protein
peptide intensity (log2)
4
2
0
−2
−4
sample
OR
PD
rowname
ALELTGLK
ALVATPGKK
EAMEDGEIDGNK
EAMEDGEIDGNKVTLDWAKPK
ESFDGSVR
EVFEDAAEIR
FGYVDFESAEDLEK
GFGFVDFNSEEDAK
GIAYIEFK
GLSEDTTEETLK
GLSEDTTEETLKESFDGSVR
GYAFIEFASFEDAK
IVTDRETGSSK
KFGYVDFESAEDLEK
KVVVSPTKK
LELQGPR
NDLAVVDVR
P19338
QKVEGTEPTTAFNLFVGNLNFNK
SISLYYTGEK
TEADAEKTFEEK
TGISDVFAK
TLVLSNLSYSATEETLQEVFEK
VAVATPAKK
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VFGNEIK
VTLDWAKPK
VTQDELK
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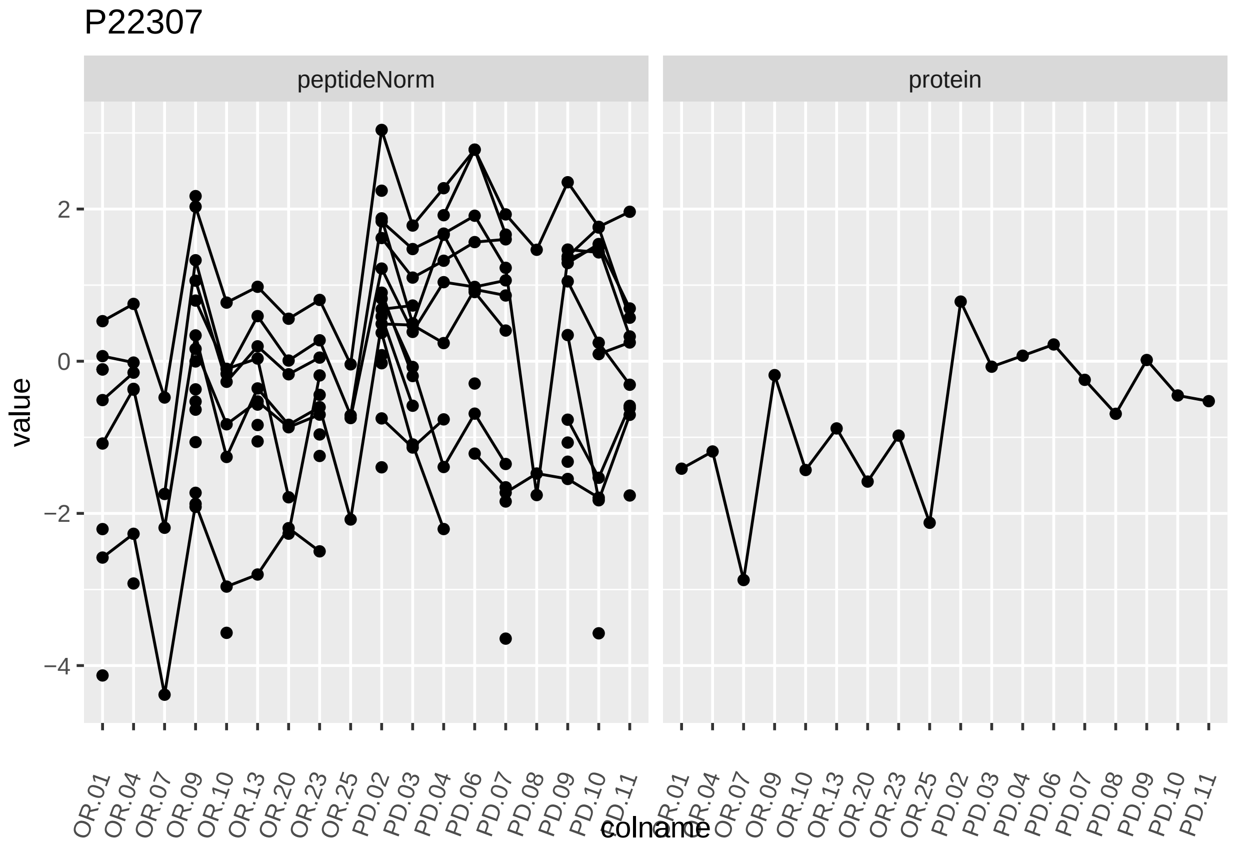
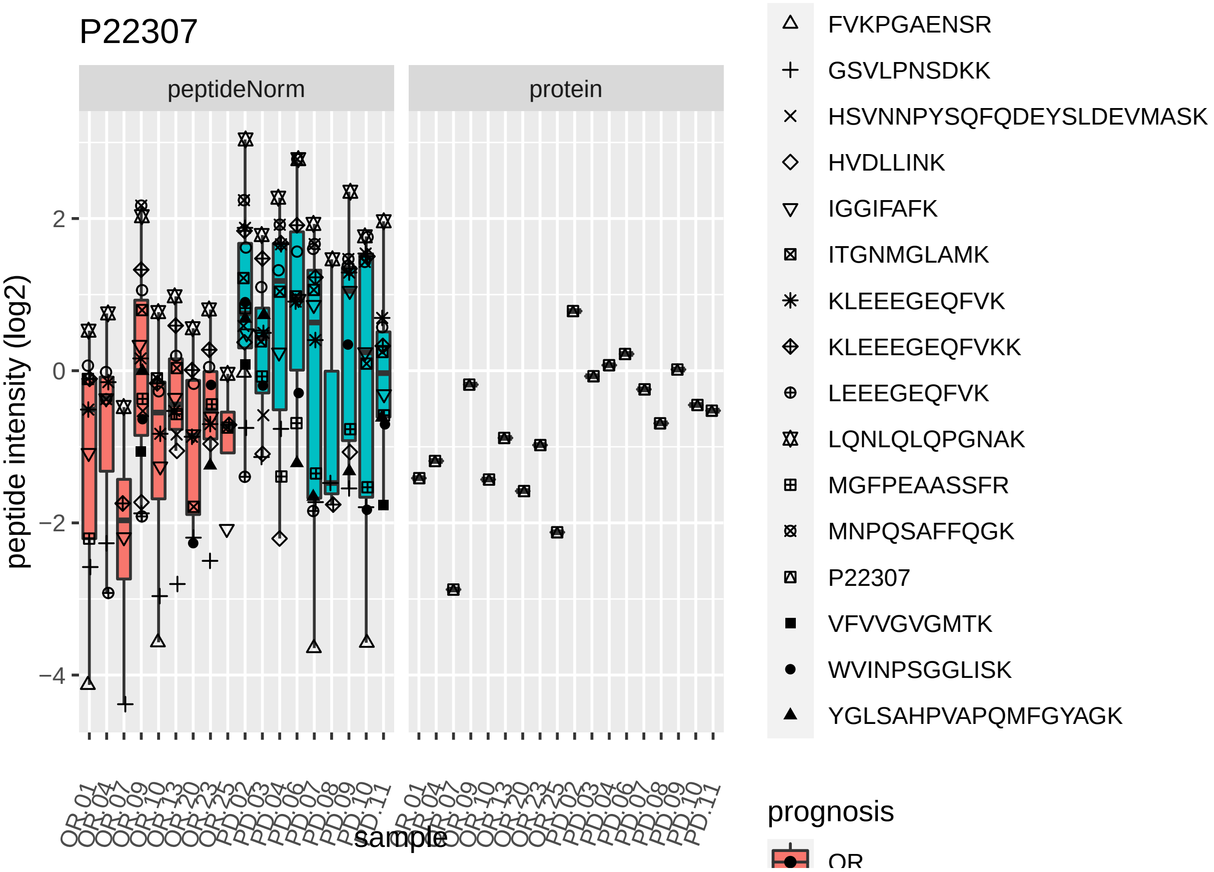
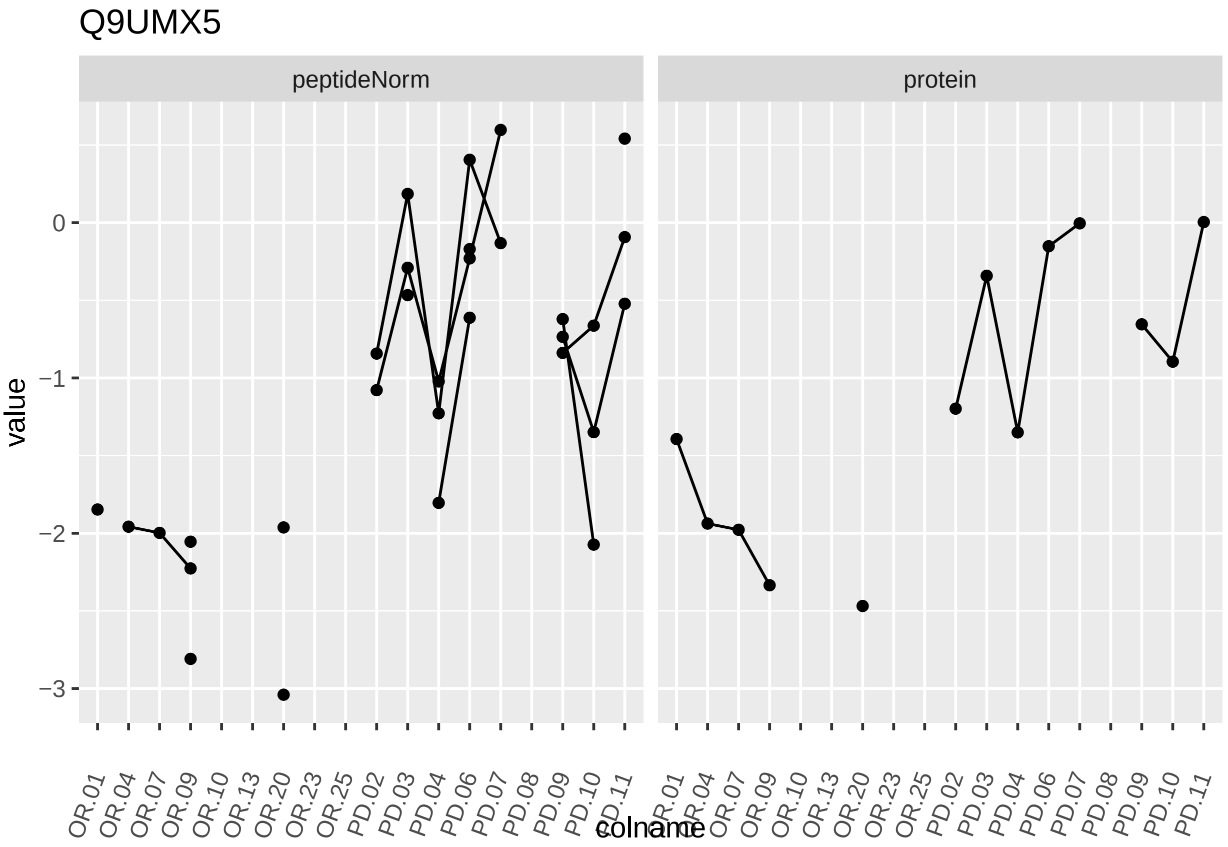
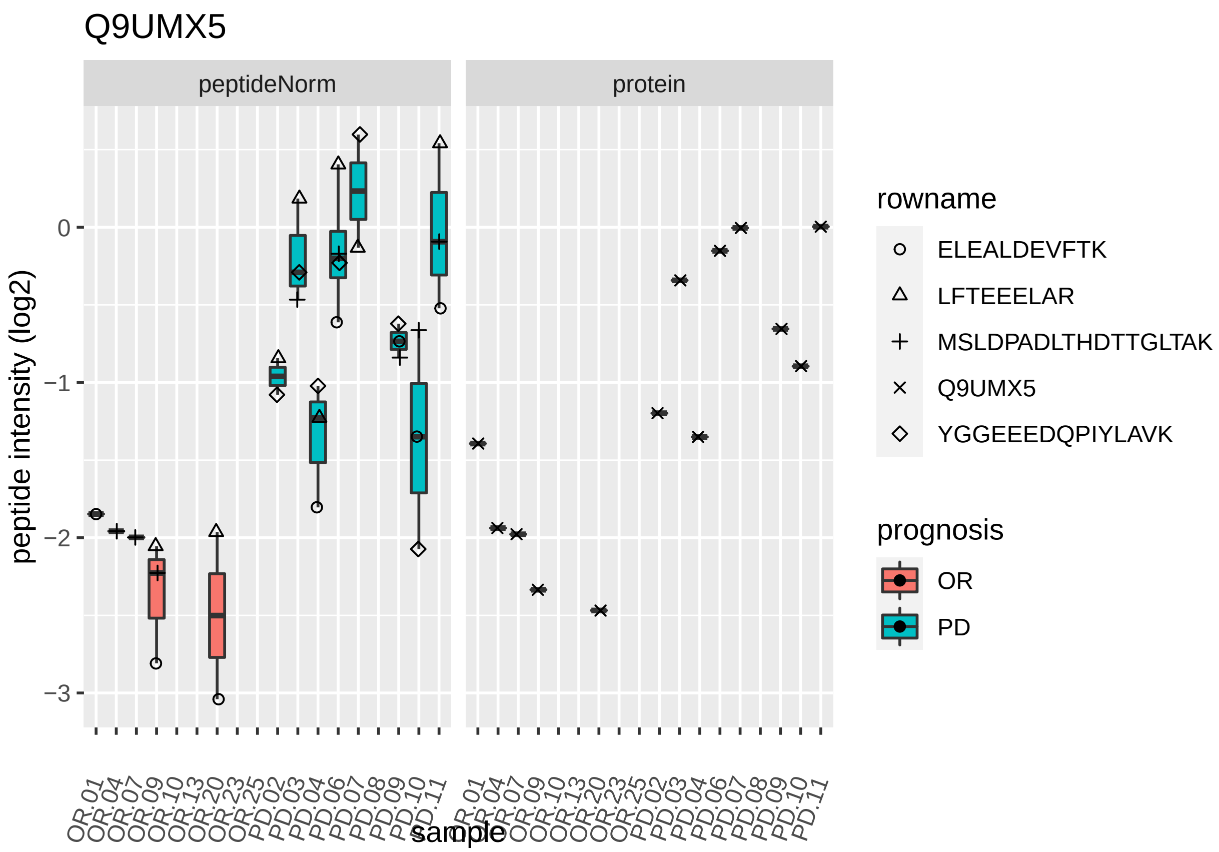
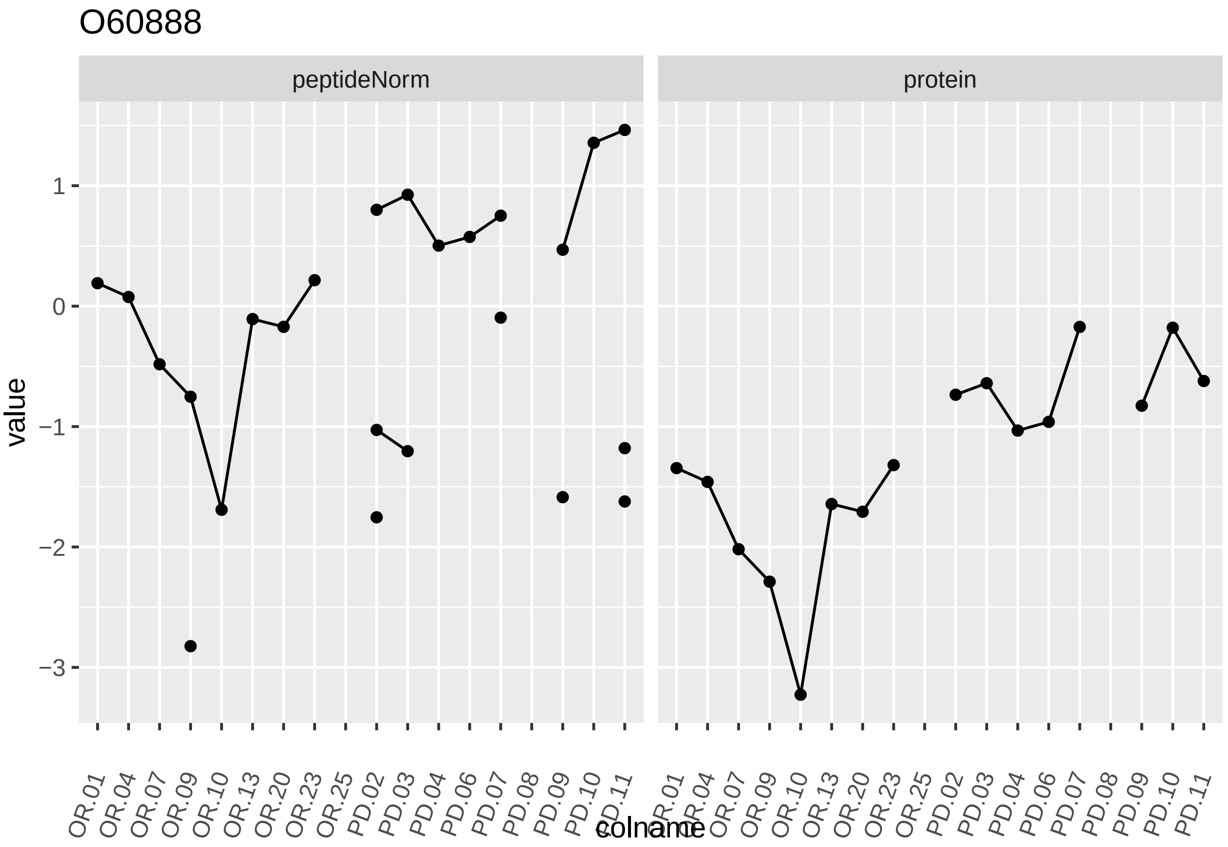
VVVSPTKK


P22307
peptideNorm
protein
value
2
0
−2
−4
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11


P22307
peptideNorm
protein
peptide intensity (log2)
2
0
−2
−4
sample
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
FVKPGAENSR
GSVLPNSDKK
HSVNNPYSQFQDEYSLDEVMASK
HVDLLINK
IGGIFAFK
ITGNMGLAMK
KLEEEGEQFVK
KLEEEGEQFVKK
LEEEGEQFVK
LQNLQLQPGNAK
MGFPEAASSFR
MNPQSAFFQGK
P22307
VFVVGVGMTK
WVINPSGGLISK
YGLSAHPVAPQMFGYAGK
prognosis
OR


Q9UMX5
peptideNorm
protein
value
0
−1
−2
−3
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11


Q9UMX5
peptideNorm
protein
peptide intensity (log2)
0
−1
−2
−3
sample
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
rowname
○ ELEALDEVFTK
△ LFTEEELAR
+ MSLDPADLTHDTTGLTAK
× Q9UMX5
◇ YGGEEEDQPIYLAVK
prognosis
OR
PD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peptideNorm
protein
value
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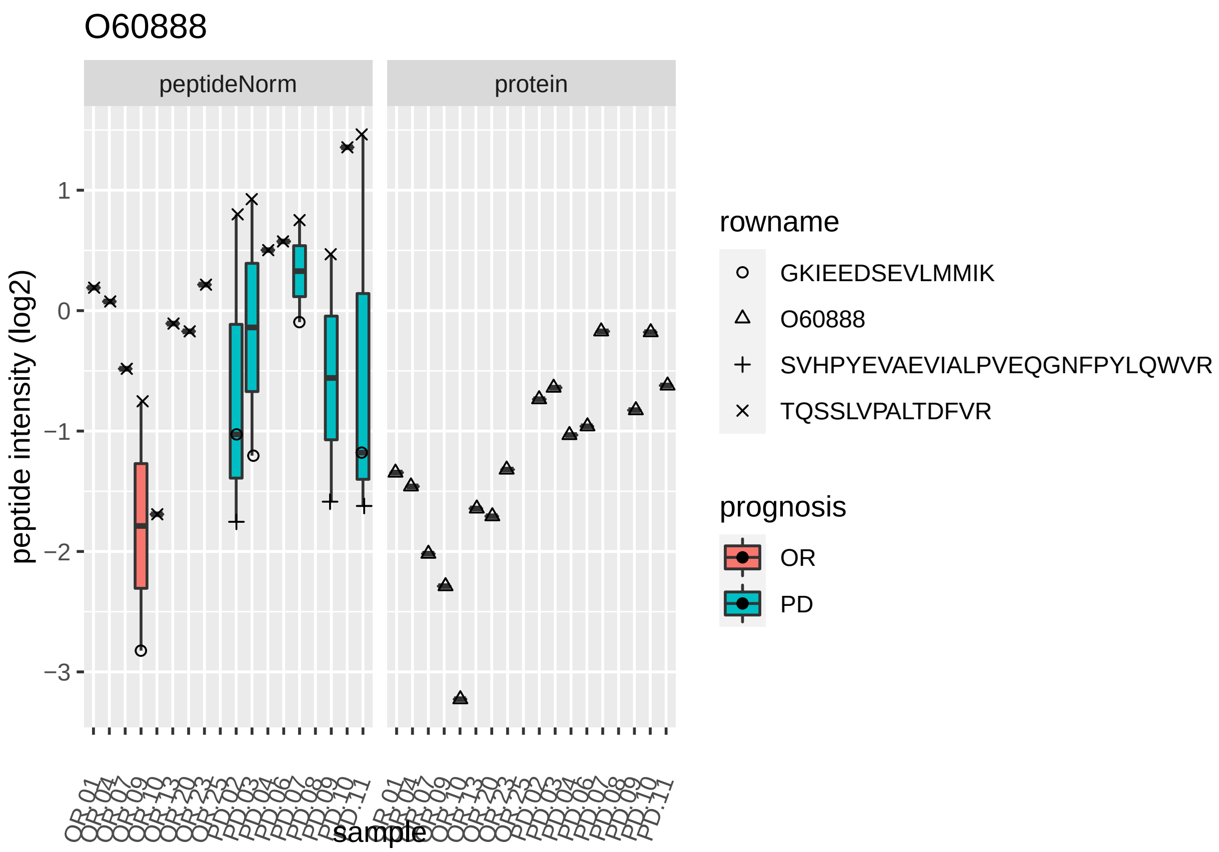
0
−1
−2
−3
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11


O60888
peptideNorm
protein
peptide intensity (log2)
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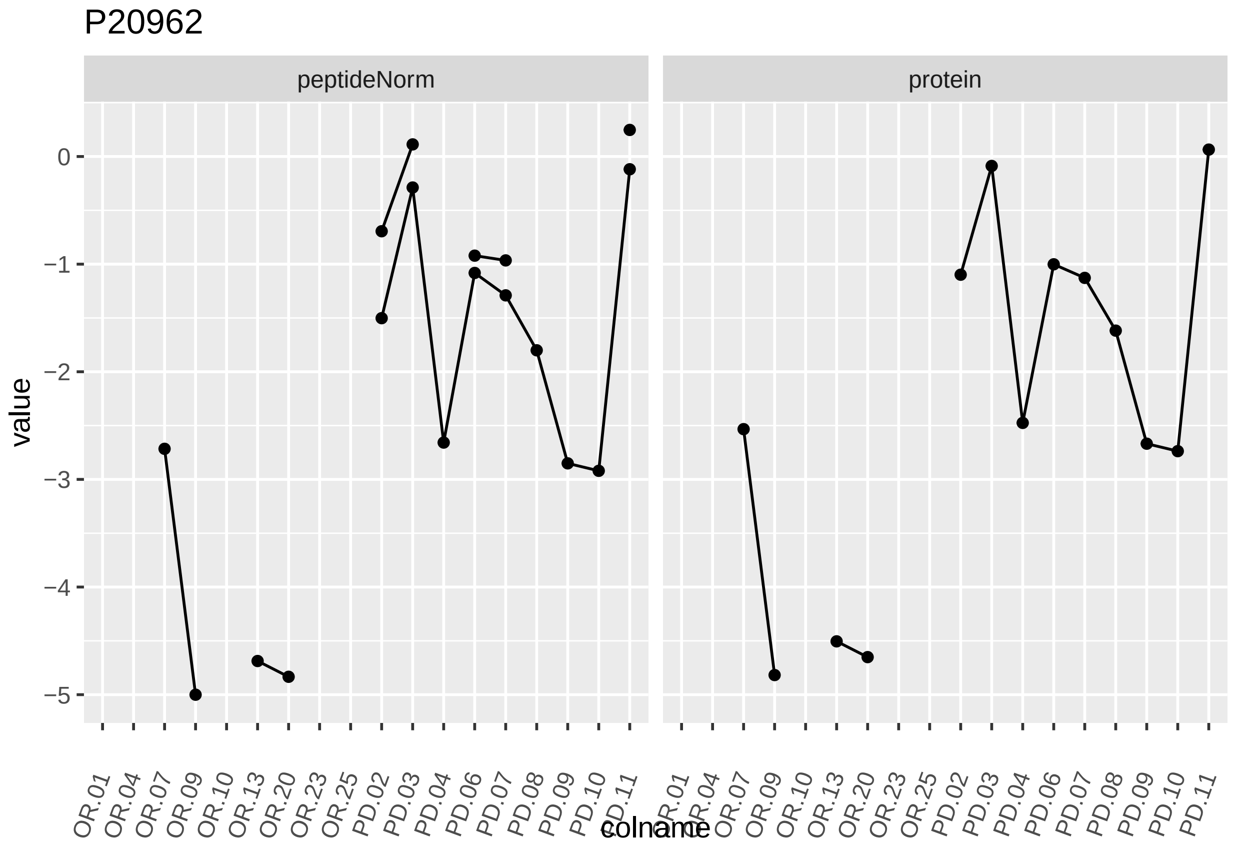
0
−1
−2
−3
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
sample
rowname
○ GKIEEDSEVLMMIK
△ O60888
+ SVHPYEVAEVIALPVEQGNFPYLQWVR
× TQSSLVPALTDFVR
prognosis
🟥 OR
🟦 PD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−4
−5
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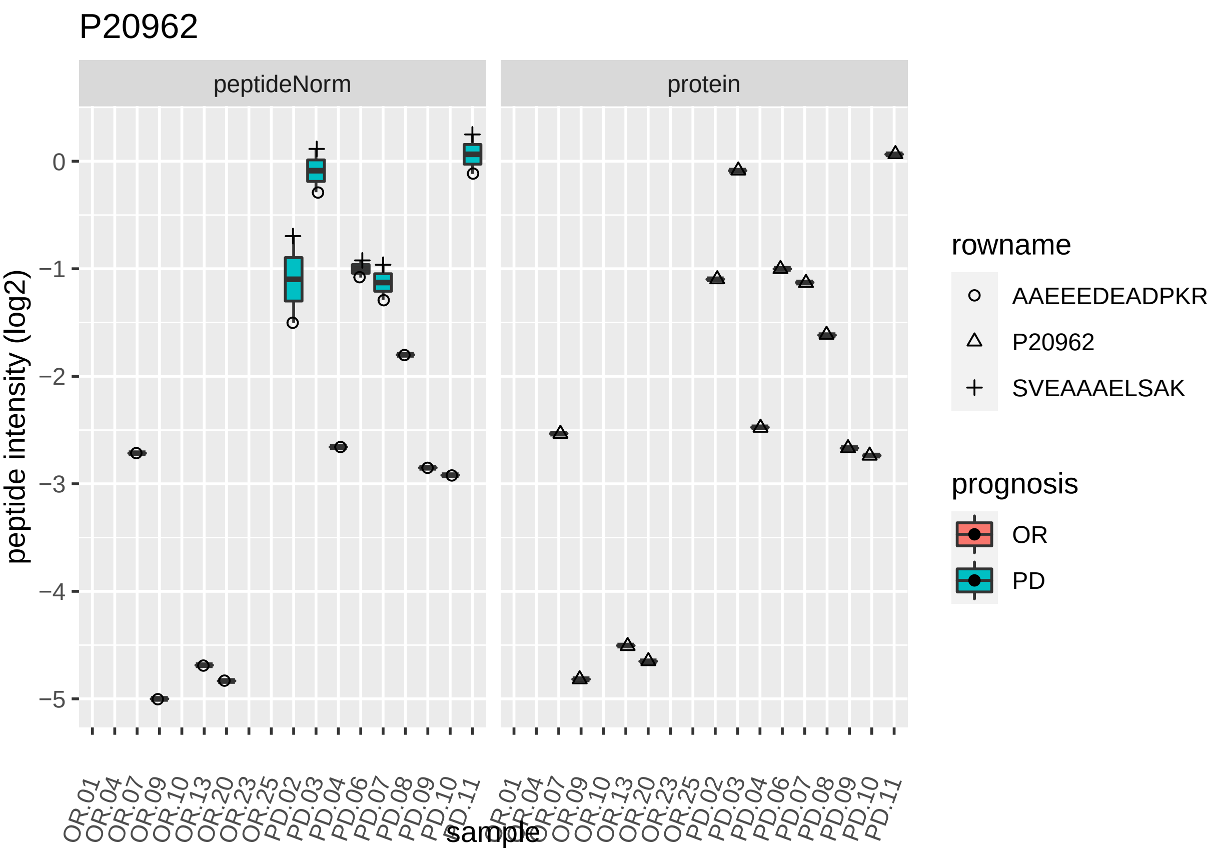
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11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protein
peptide intensity (log2)
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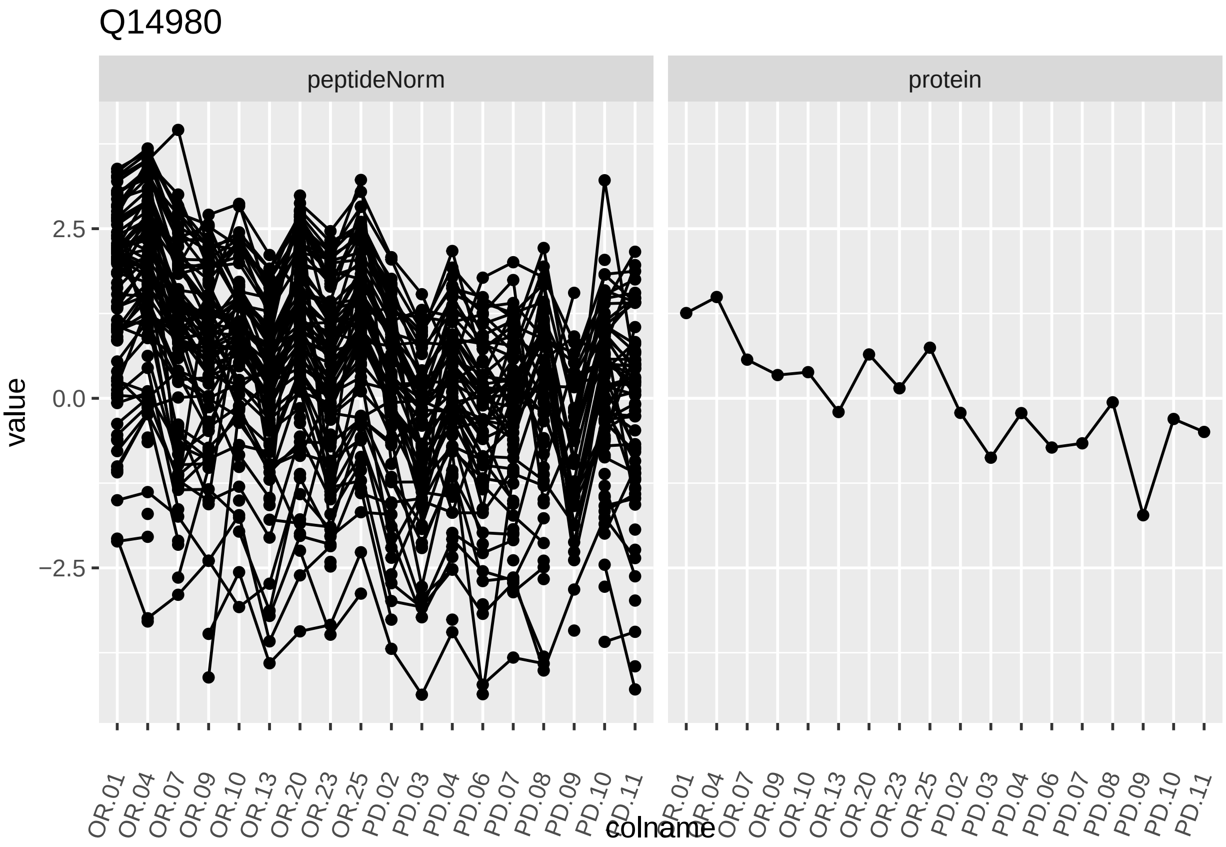
−1
−2
−3
−4
−5
sample
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
rowname
AAEEEDEADPKR
P20962
SVEAAAELSAK
prognosis
OR
PD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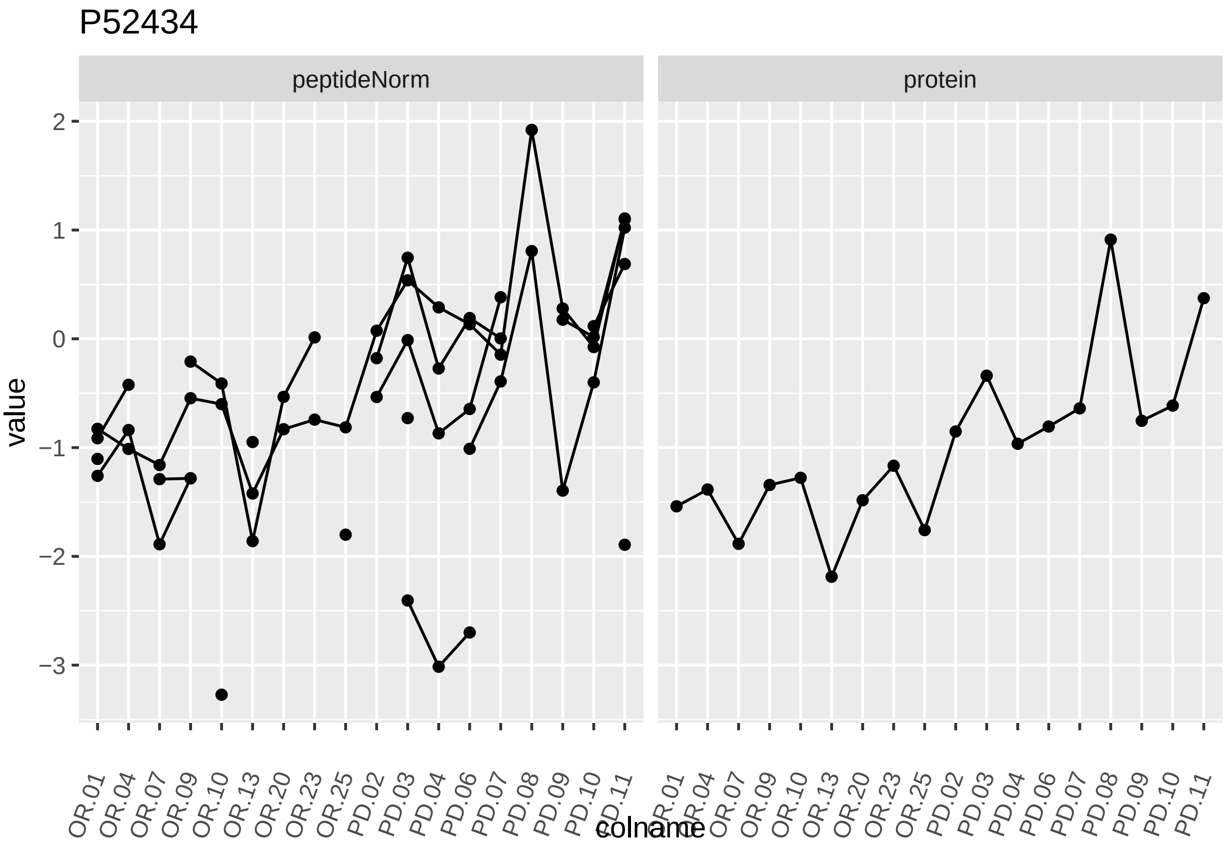
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

R	%	HLTAQVR	7	LGSPDYGNSALLSLPGYRPTTR	I	QELTSQ
	&	HQVEQLSSSLK	8	LLQAETASNSAR	J	QEQHEA
	'	HREELEQSK	9	LPPKVESLESLYFTPIPAR	K	QFCSTQ
AR	(	IATTTASAATAAAIGATPR	:	LQAQLNELQAQLSQK	L	QFLEVE
	)	IHGTEEGQQILK	;	LQNALNEQR	M	QLEALE
AAGR	*	INQLSEENGDLSFK	<	LQQLGEAHQAETEVLR	N	QPEWLE
SEAAGR	+	IQAELAVILK	=	LQQLGEAHQAETEVLRR	O	QQEQAD
QEQASQGLR	,	KHPSSPECLVSAQK	>	LSQLEEHLSQLQDNPPQEK	P	QQLSSL
ESECEQLVK	-	KINQLSEENGDLSFK	?	LTAQVASLTSELTTLNATIQQQDQELAGLK	Q	QQNELA
TMR	.	KLDVEEPDSANSSFYSTR	@	LTAQVEQLEVFQR	R	QQNQE
	/	KNSLISSLEEEVSILNR	A	LVMAESEK	S	RSQAGV
	0	KQQNQELQEQLR	B	MTMLLLYHSTMSSK	T	SAPASQ
	1	KVEELQACVETAR	C	NSLISSLEEEVSILNR	U	SLEAQV
STQALVSELLPAK	2	LADDLSTLQEK	D	PSLSLGTITDEEMK	V	SLVEQH
	3	LALLNEK	E	Q14980	W	SNRDEL
EDLENFLQK	4	LDFVCSFLQK	F	QAQLAQTLQQQEQASQGLR	X	SNRDEL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peptideNorm
protein
value
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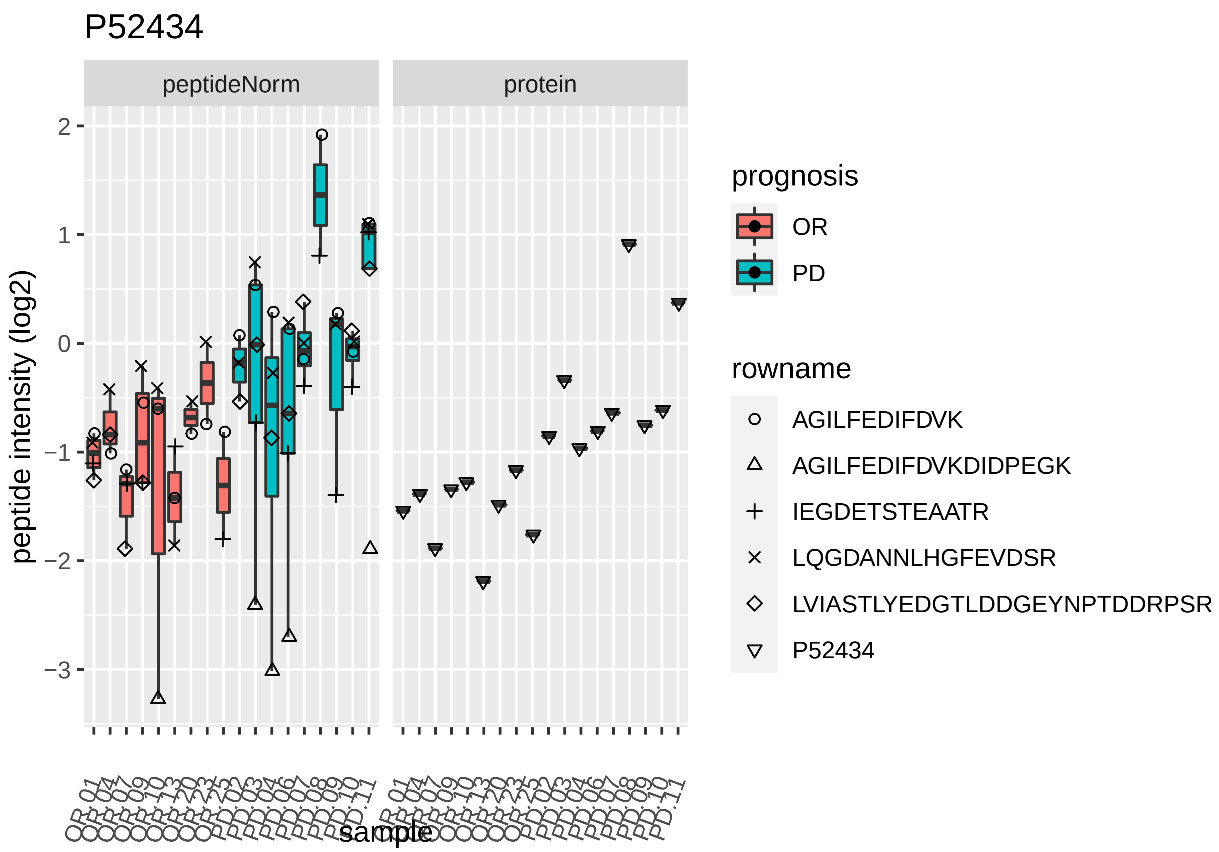
1
0
−1
−2
−3
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11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peptideNorm
protein
peptide intensity (log2)
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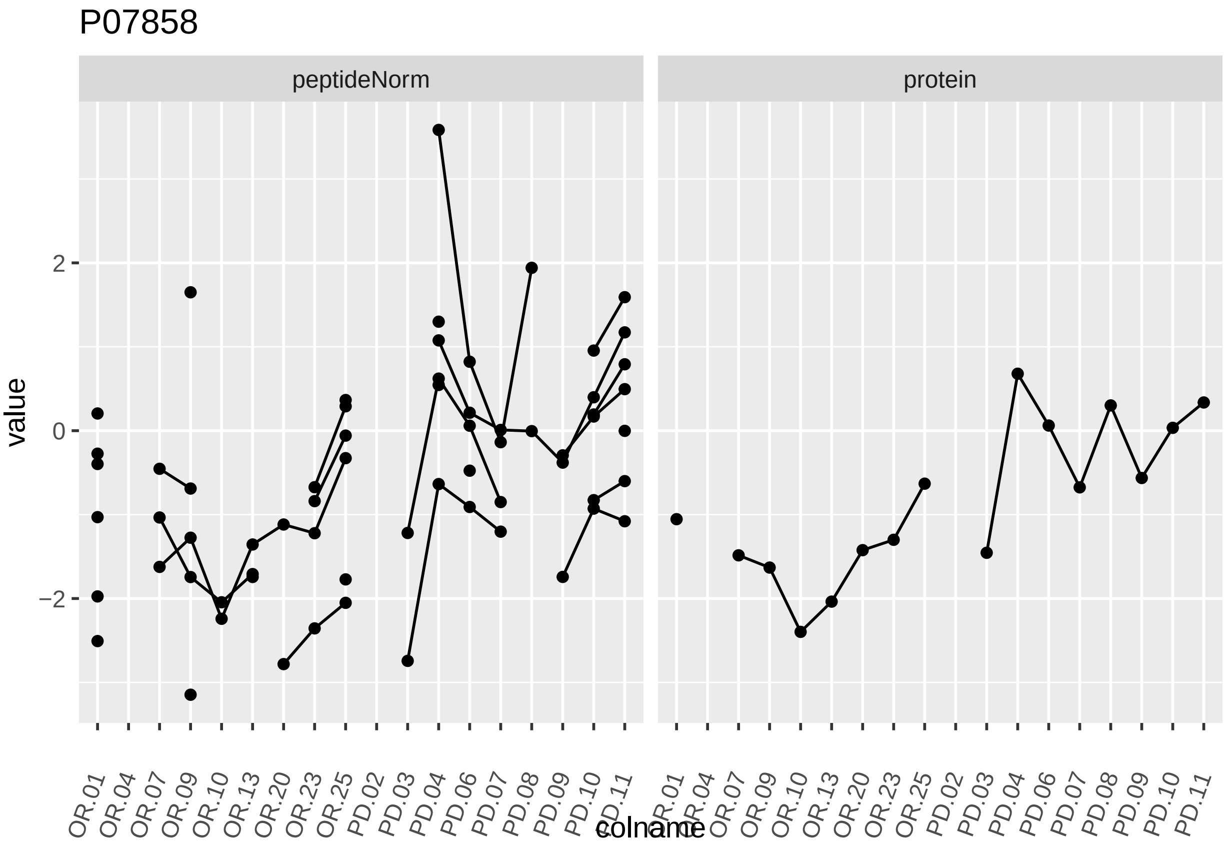
1
0
−1
−2
−3
sample
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
prognosis
OR
PD
rowname
AGILFEDIFDVK
AGILFEDIFDVKDIDPEGK
IEGDETSTEAATR
LQGDANNLHGFEVDSR
LVIASTLYEDGTLDDGEYNPTDDRPSR
P52434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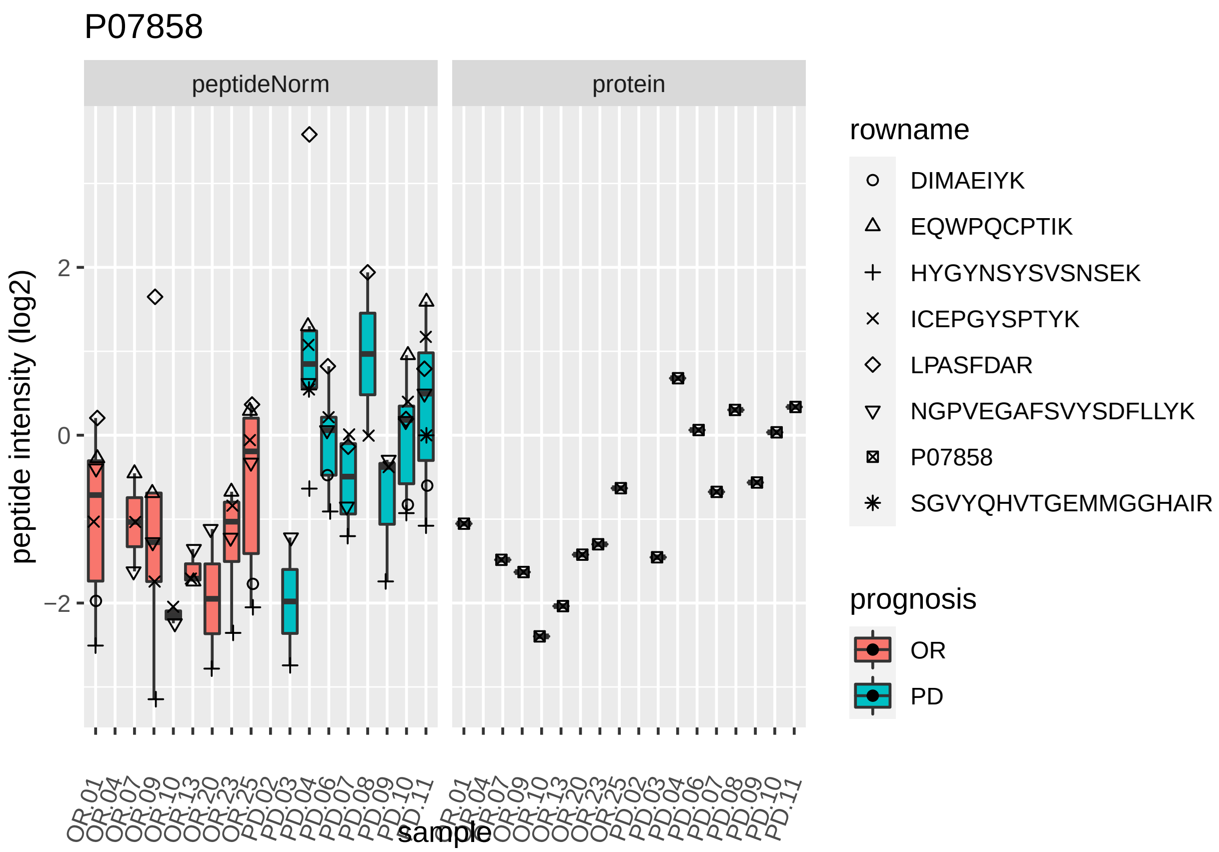
peptideNorm
protein
value
2
0
−2
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11


P07858
peptideNorm
protein
peptide intensity (log2)
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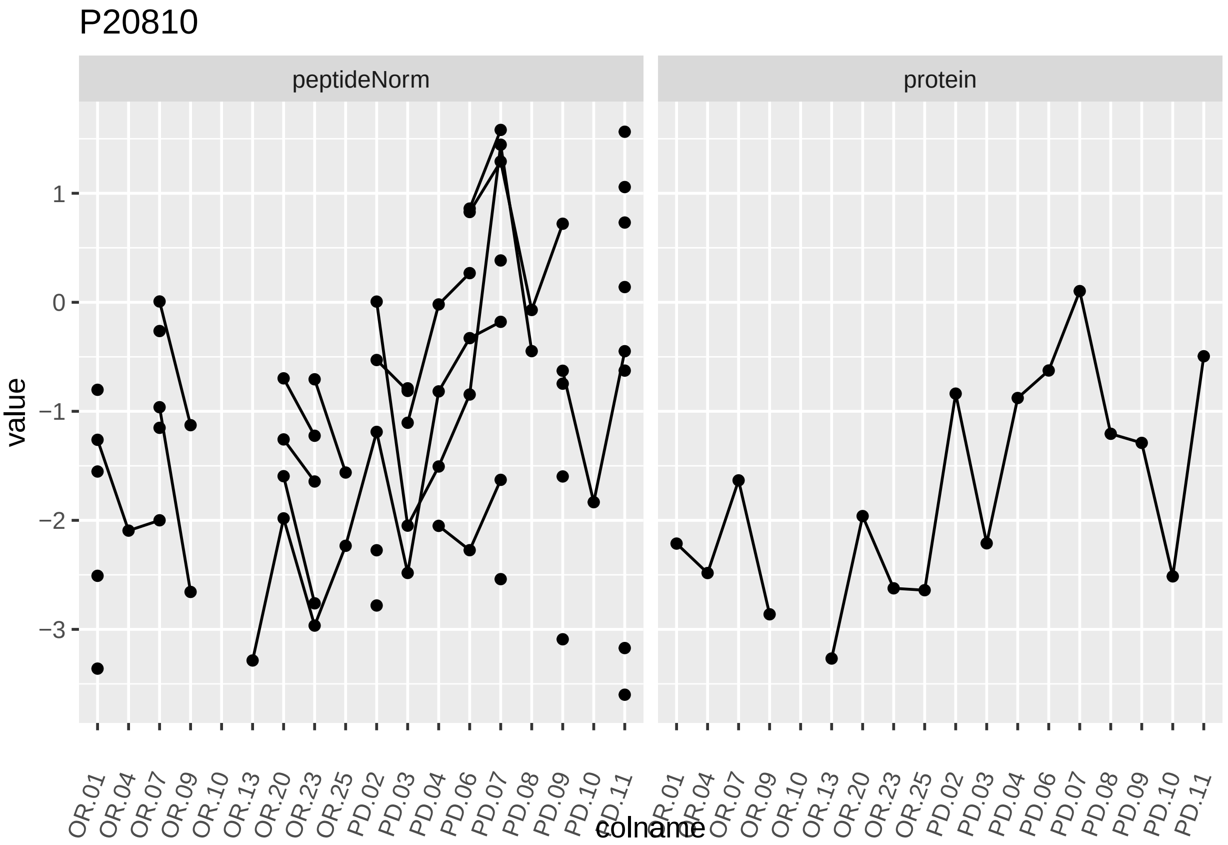
0
−2
sample
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
rowname
DIMAEIYK
EQWPQCPTIK
HYGYNSYSVSNSEK
ICEPGYSPTYK
LPASFDAR
NGPVEGAFSVYSDFLLYK
P07858
SGVYQHVTGEMMGGHAIR
prognosis
OR
PD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peptideNorm
protein
value
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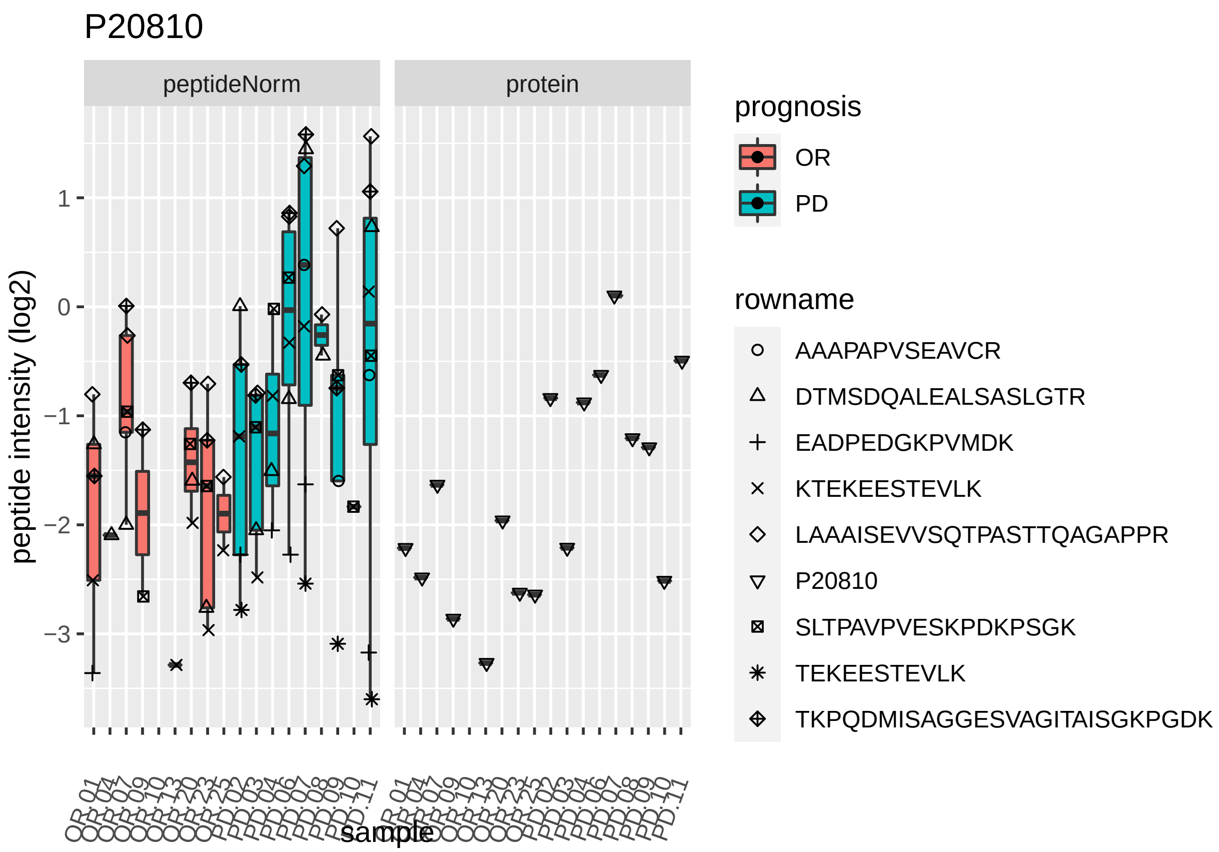
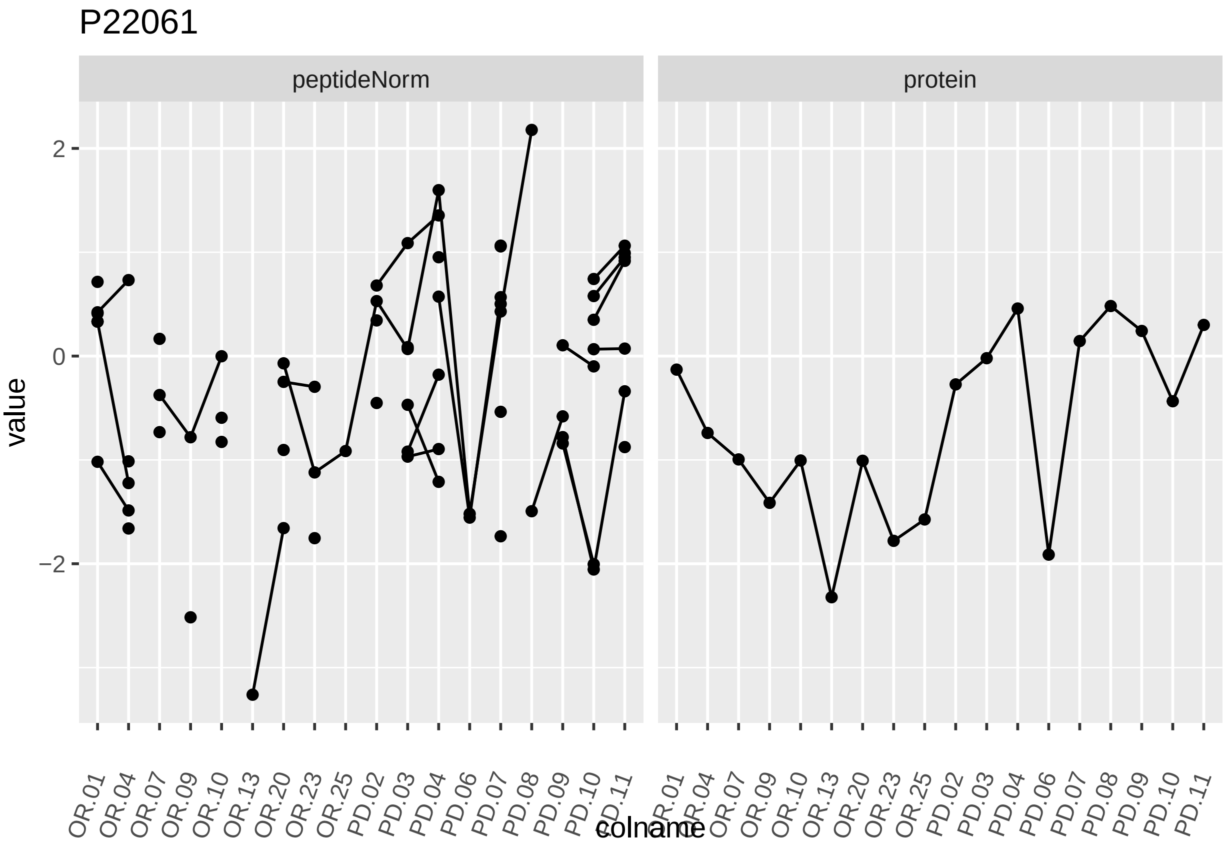
0
−1
−2
−3
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11


P20810
peptideNorm
protein
peptide intensity (log2)
1
0
−1
−2
−3
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.22
OR.23
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
sample
prognosis
OR
PD
rowname
AAAPAPVSEAVCR
DTMSDQALEALSASLGTR
EADPEDGKPVMDK
KTEKEESTEVLK
LAAAISEVVSQTPASTTQAGAPPR
P20810
SLTPAVPVESKPDKPSGK
TEKEESTEVLK
TKPQDMISAGGESVAGITAISGKPGDK


P22061
peptideNorm
protein
value
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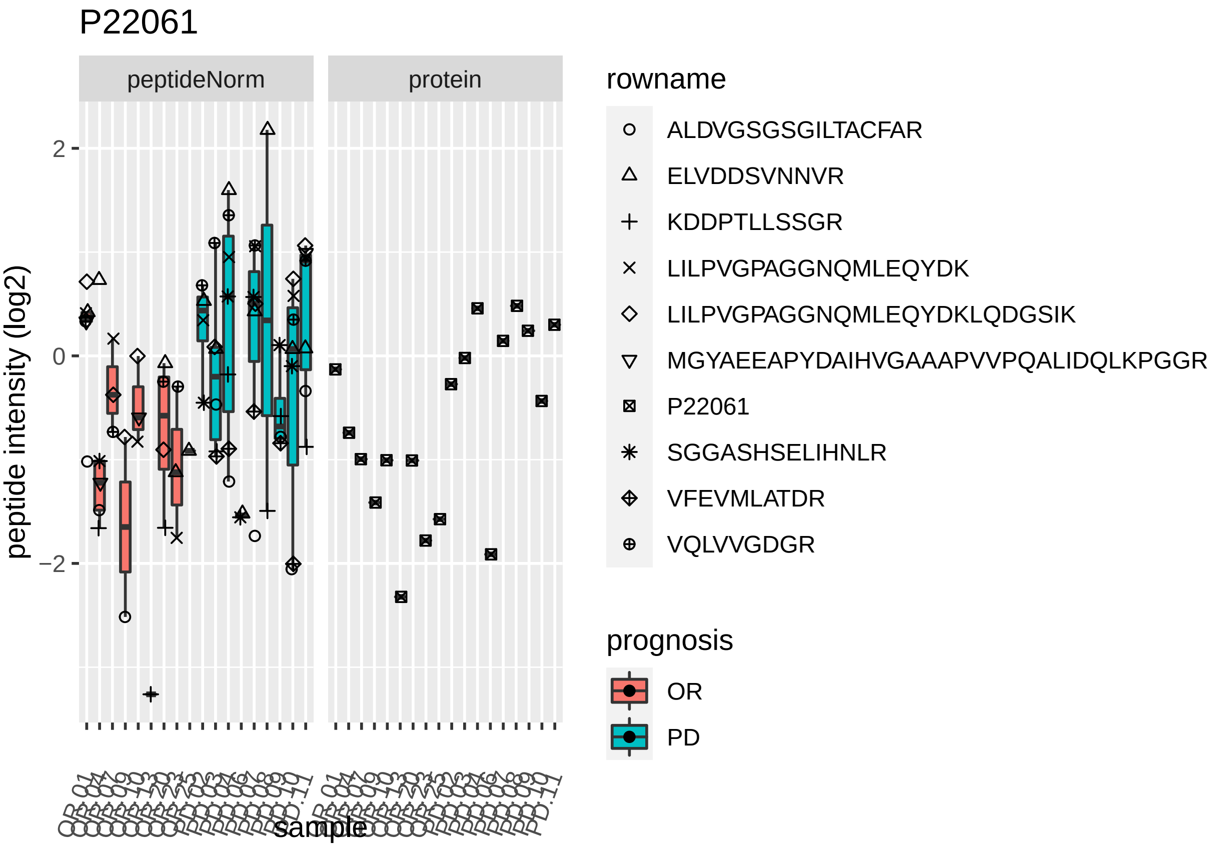
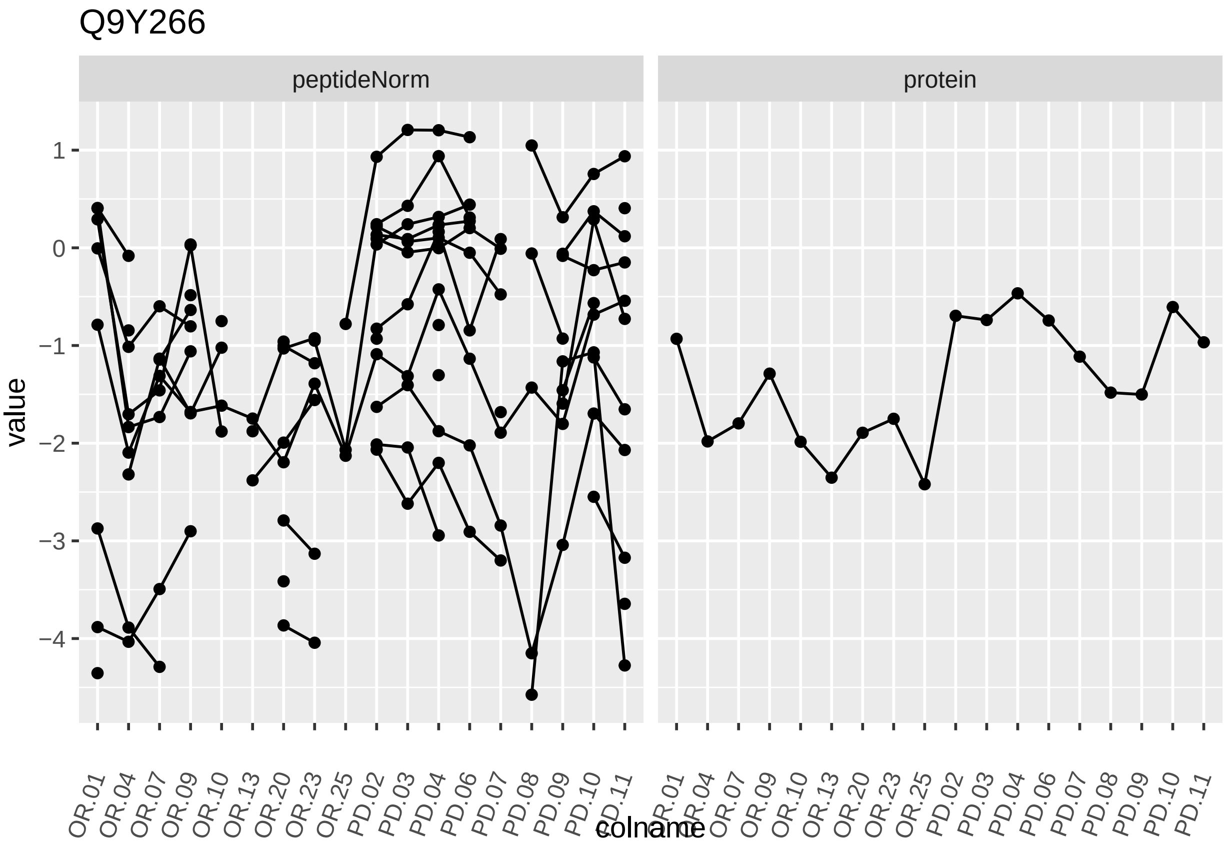
0
−2
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11


P22061
peptideNorm
protein
peptide intensity (log2)
2
0
−2
sample
rowname
○ ALDVGSGSGILTACFAR
△ ELVDDSVNNVR
+ KDDPTLLSSGR
× LILPVGPAGGNQMLEQYDK
◇ LILPVGPAGGNQMLEQYDKLQDGSIK
▽ MGYAEEAPYDAIHVGAAAPVVPQALIDQLKPGGR
⊠ P22061
✳ SGGASHSELIHNLR
◈ VFEVMLATDR
⊕ VQLVVGDGR
prognosis
🟥 OR
🟦 PD


Q9Y266
peptideNorm
protein
value
colname
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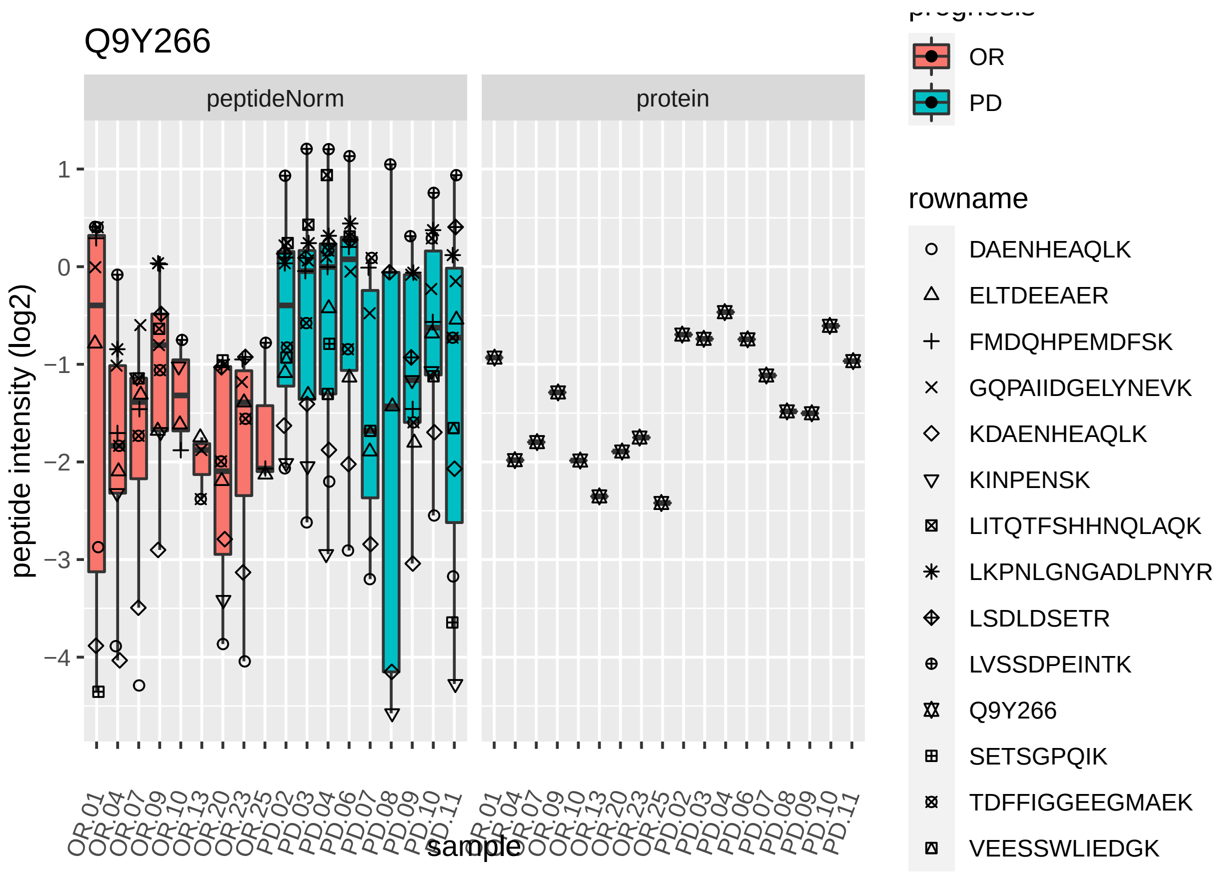
0
−1
−2
−3
−4
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11



Q9Y266
peptideNorm
protein
peptide intensity (log2)
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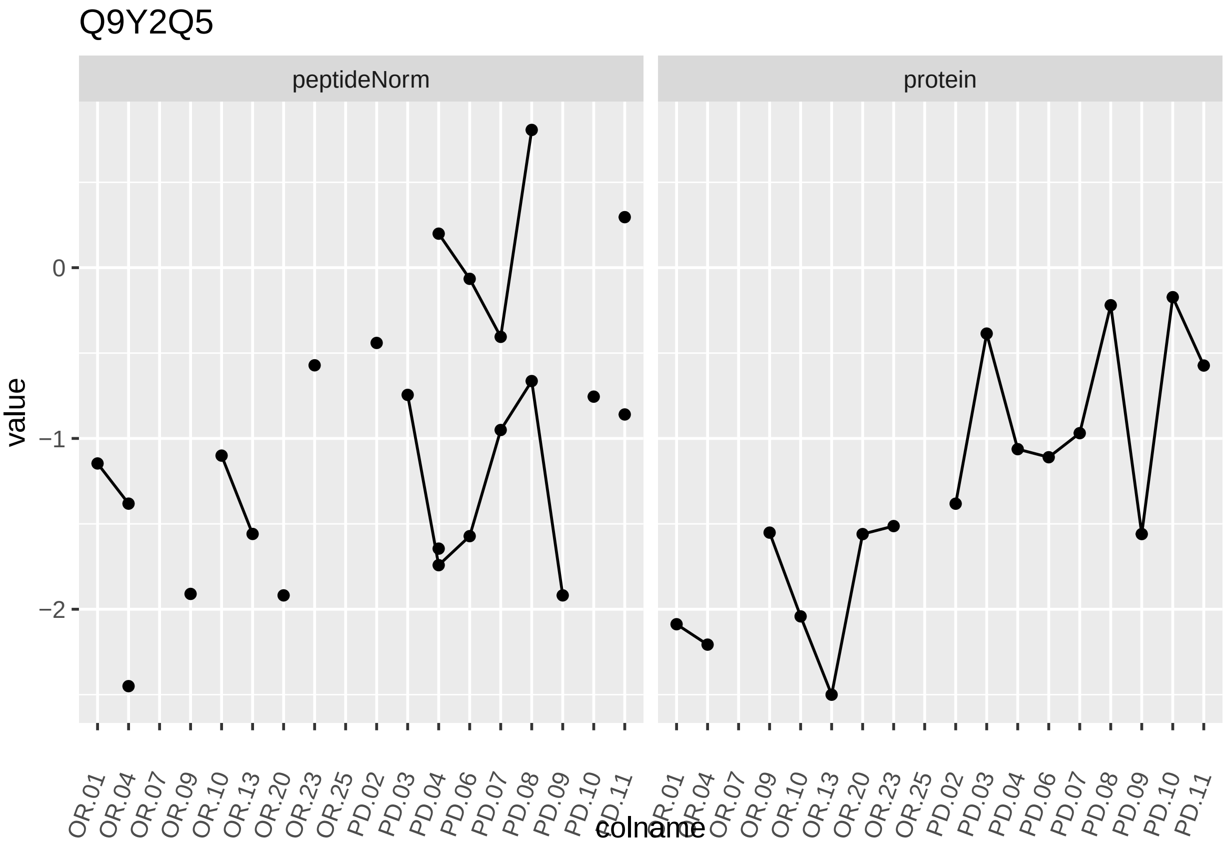
0
−1
−2
−3
−4
sample
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
prognosis
OR
PD
rowname
DAENHEAQLK
ELTDEEAER
FMDQHPEMDFSK
GQPAIIDGELYNEVK
KDAENHEAQLK
KINPENSK
LITQTFSHHNQLAQK
LKPNLGNGADLPNYR
LSDLDSETR
LVSSDPEINTK
Q9Y266
SETSGPQIK
TDFFIGGEEGMAEK
VEESSWLIEDGK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protein
value
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−2
colname
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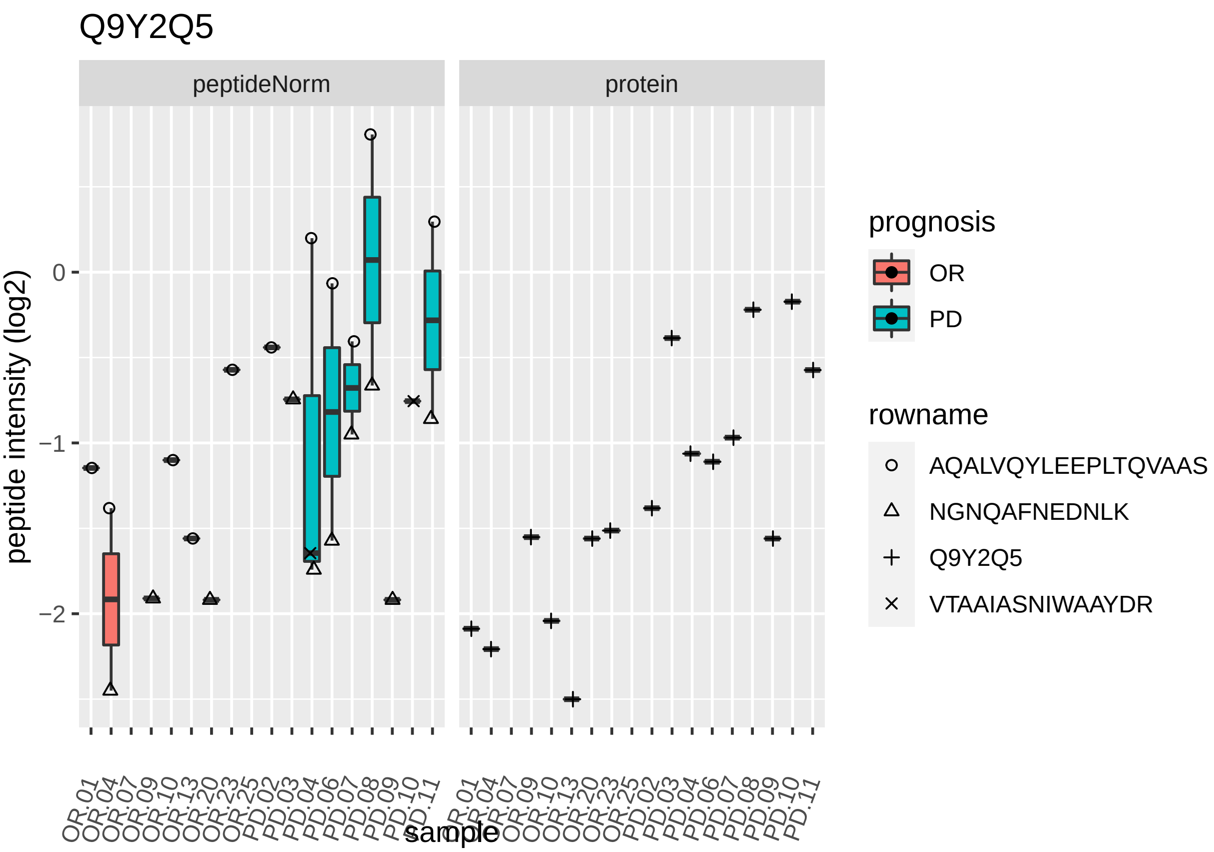
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11


Q9Y2Q5
peptideNorm
protein
peptide intensity (log2)
0
−1
−2
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
sample
prognosis
OR
PD
rowname
AQALVQYLEEPLTQVAAS
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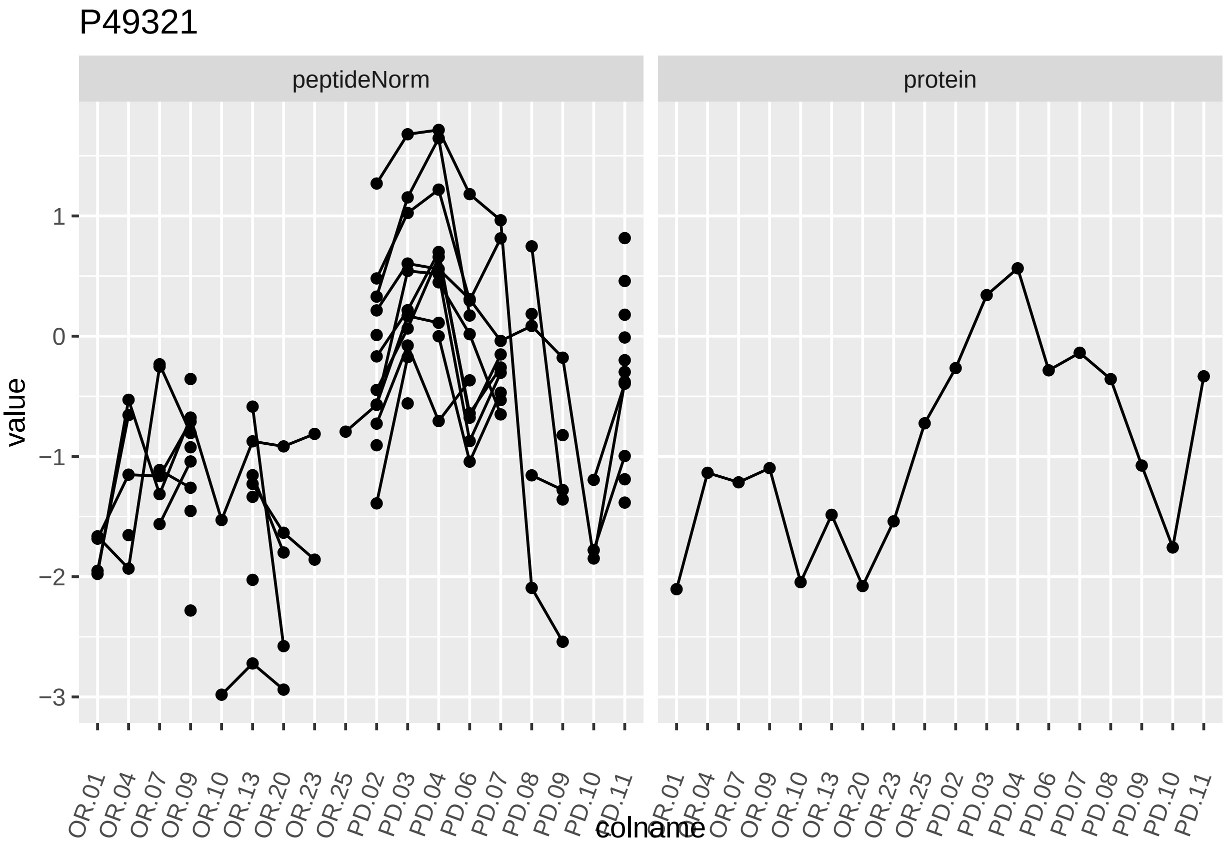
VTAAIASNIWAAYDR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−2
−3
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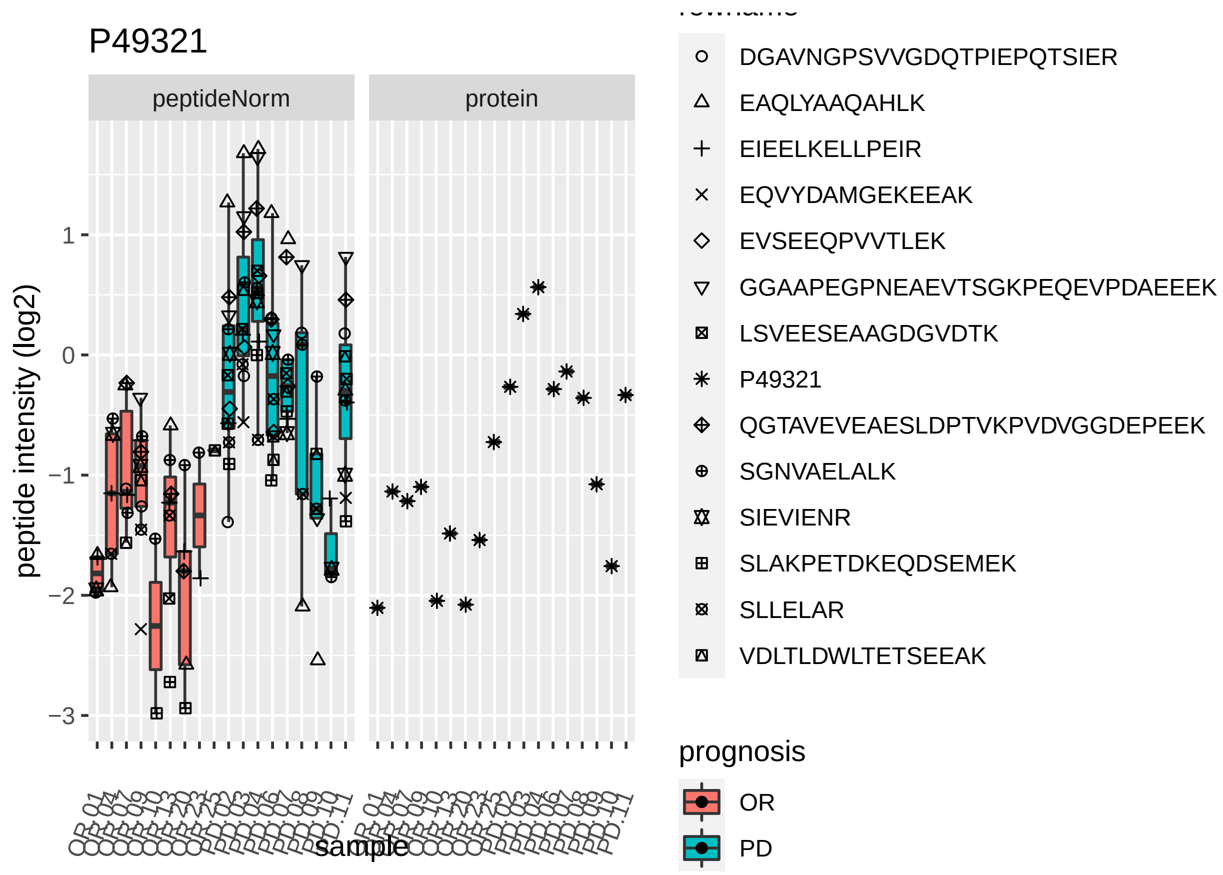
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11


P49321
peptideNorm
protein
peptide intensity (log2)
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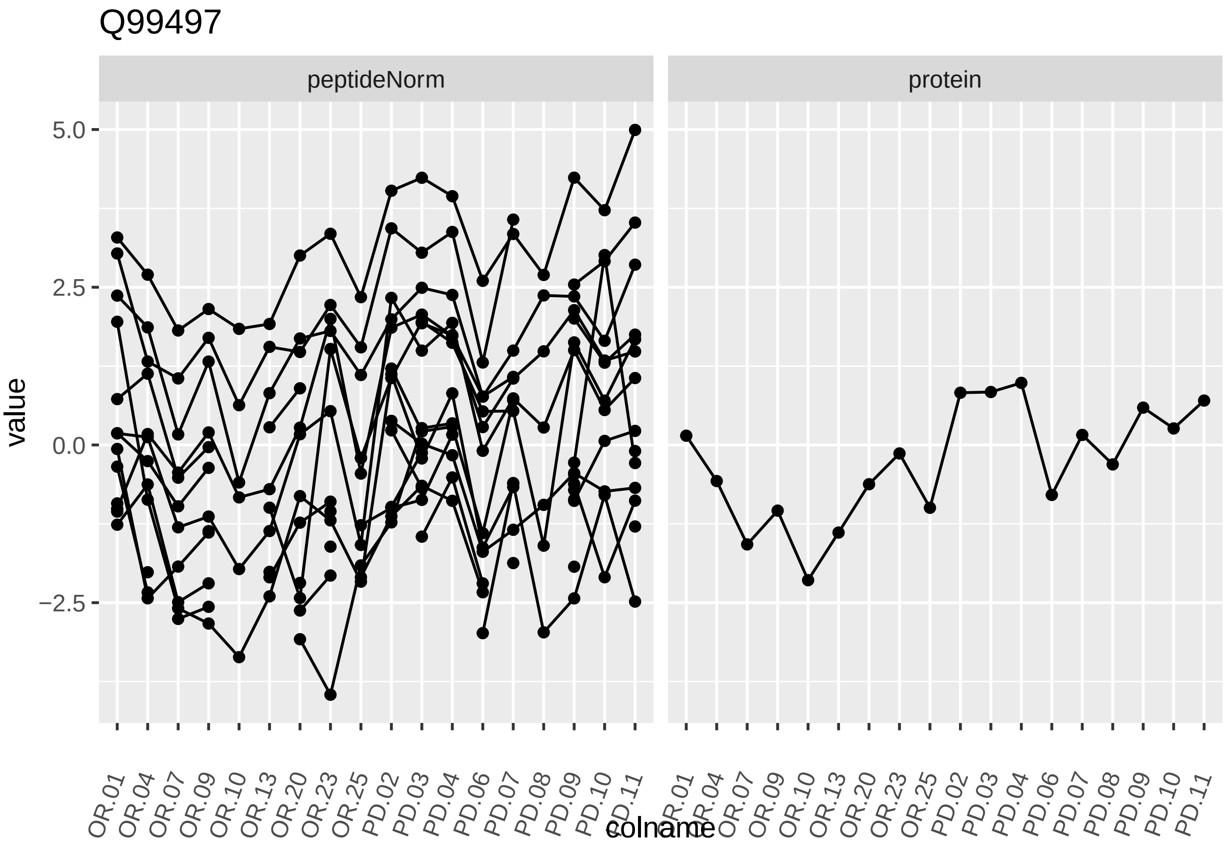
0
−1
−2
−3
sample
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
rowname
○ DGAVNGPSVVGDQTPIEPQTSIER
△ EAQLYAAQAHLK
+ EIEELKELLPEIR
× EQVYDAMGEKEEAK
◇ EVSEEQPVVTLEK
▽ GGAAPEGPNEAEVTSGKPEQEVPDAEEEK
⊠ LSVEESEAAGDGVDTK
✳ P49321
⊕ QGTAVEVEAESLDPTVKPVDVGGDEPEEK
⊕ SGNVAELALK
✡ SIEVIENR
⊞ SLAKPETDKEQDSEMEK
⊠ SLLELAR
◪ VDLTLDWLTETSEEAK
prognosis
🟥 OR
🟦 PD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protein
value
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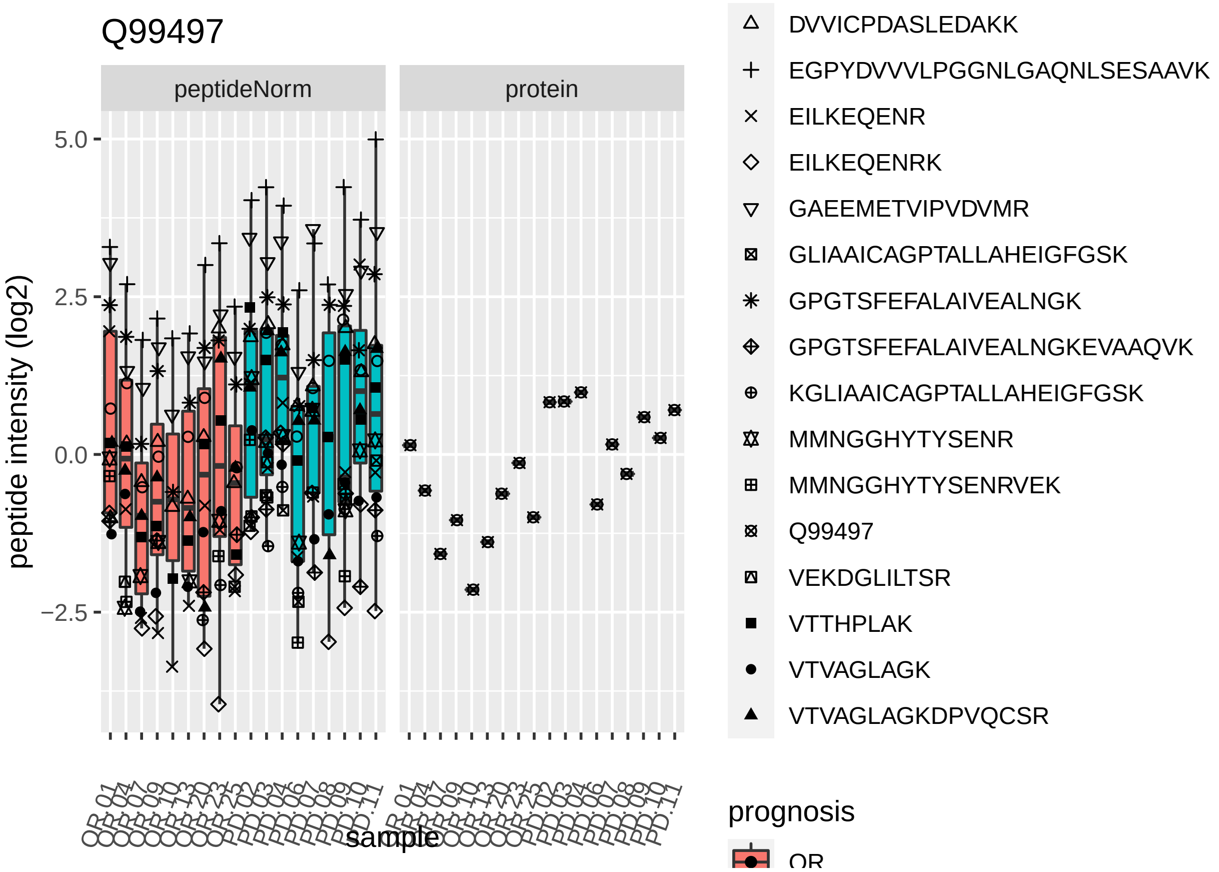
2.5
0.0
−2.5
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11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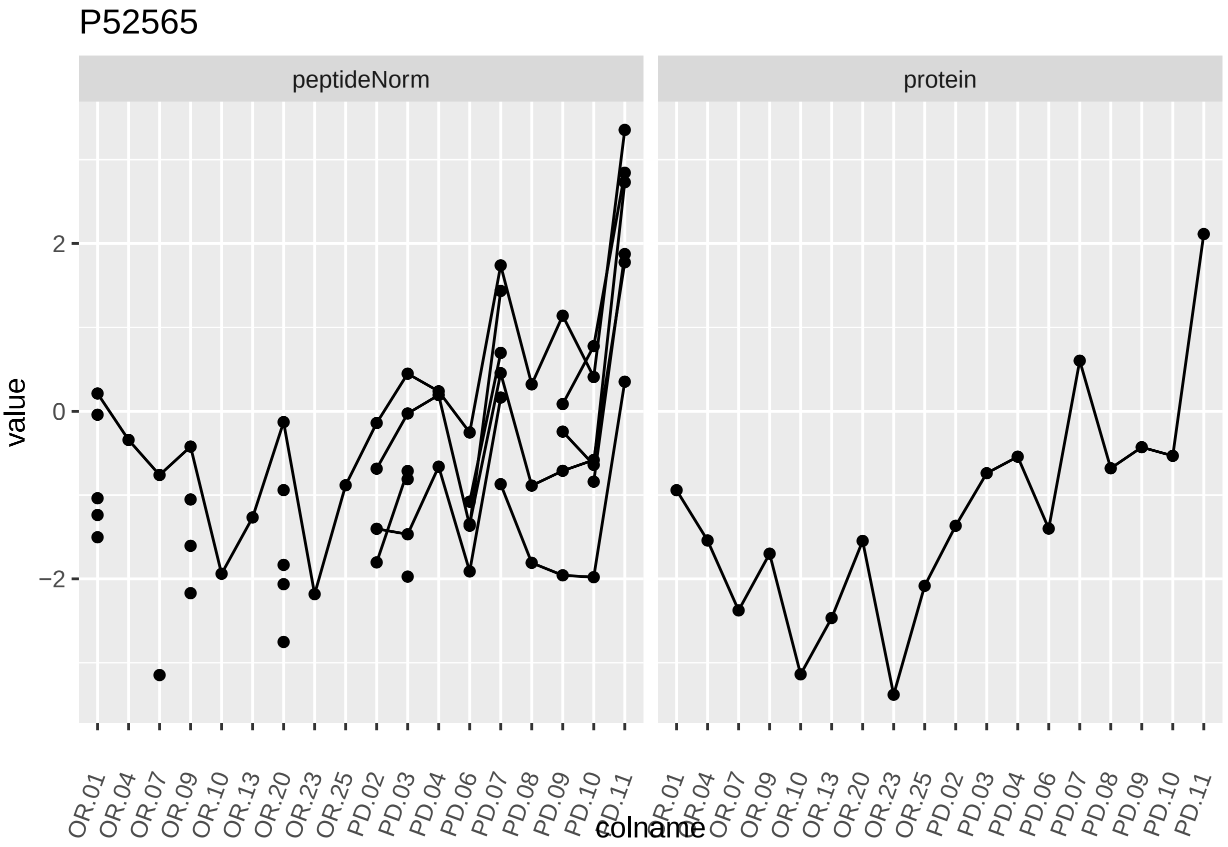
peptideNorm
protein
peptide intensity (log2)
5.0
2.5
0.0
−2.5
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
sample
△ DVVICPDASLEDAKK
+ EGPYDVVVLPGGNLGAQNLSESAAVK
× EILKEQENR
◇ EILKEQENRK
▽ GAEEMETVIPVDVMR
⊠ GLIAAICAGPTALLAHEIGFGSK
✳ GPGTSFEFALAIVEALNGK
◈ GPGTSFEFALAIVEALNGKEVAAQVK
⊕ KGLIAAICAGPTALLAHEIGFGSK
✡ MMNGGHYTYSENR
⊞ MMNGGHYTYSENRVEK
⊗ Q99497
◪ VEKDGLILTSR
■ VTTHPLAK
● VTVAGLAGK
▲ VTVAGLAGKDPVQCSR
prognosis
🟥 OR


P52565
peptideNorm
protein
value
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colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
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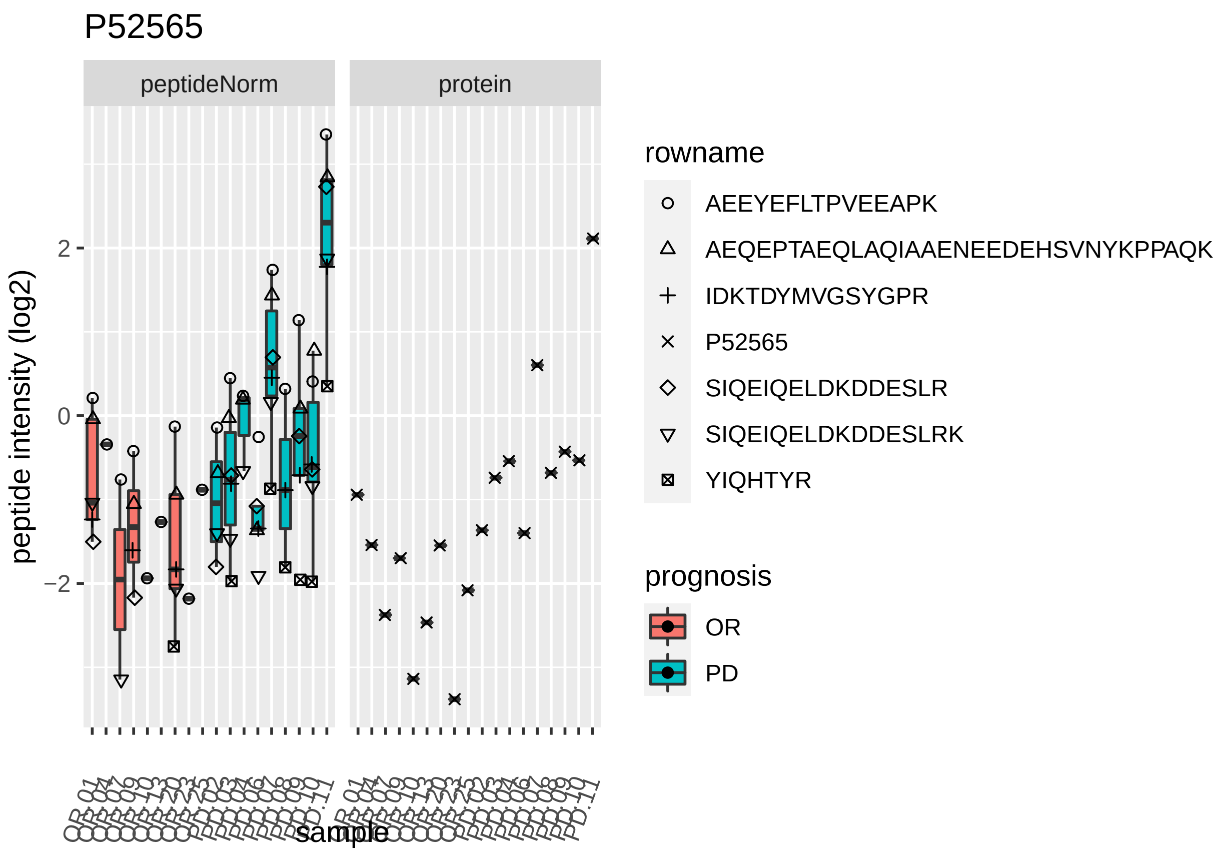
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11


P52565
peptideNorm
protein
peptide intensity (log2)
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0
−2
sample
rowname
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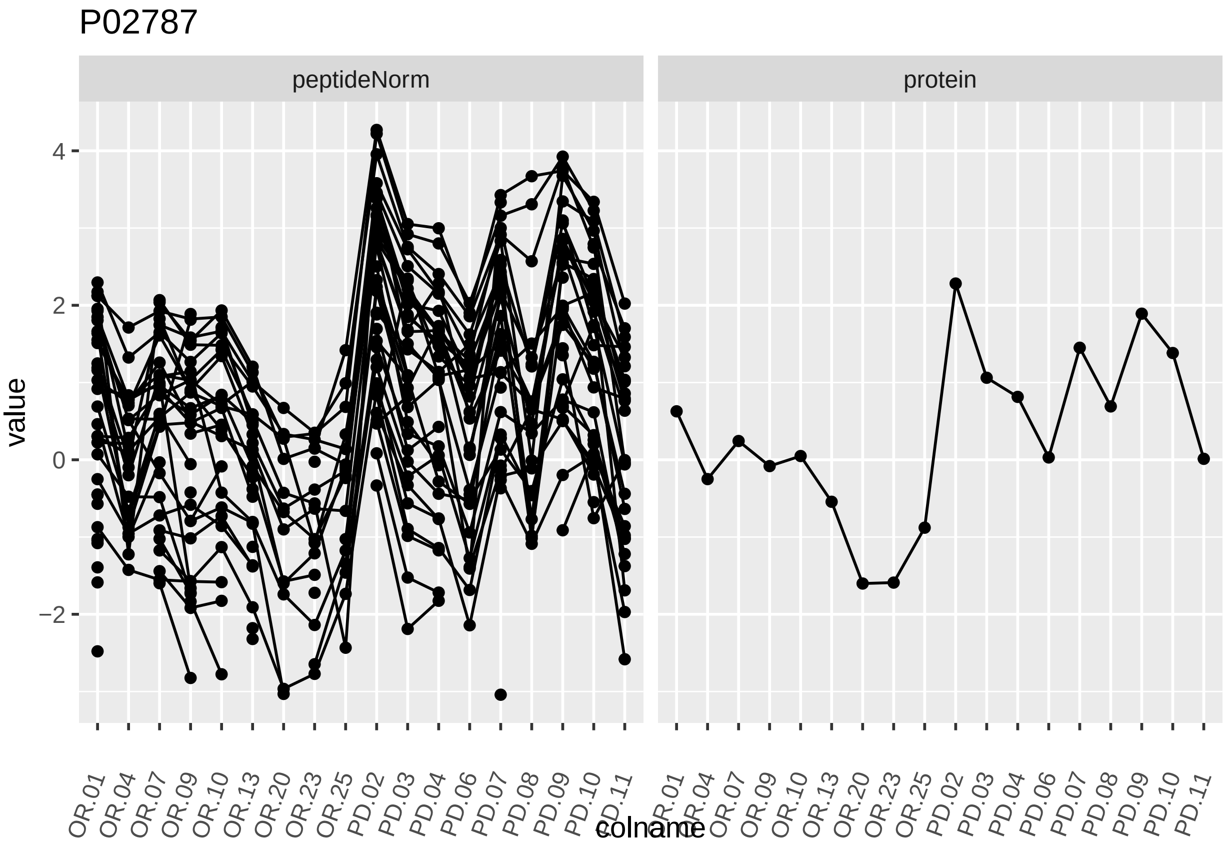
△ AEQEPTAEQLAQIAAENEEDEHSVNYKPPAQK
+ IDKTDYMVGSYGPR
× P52565
◇ SIQEIQELDKDDESLR
▽ SIQEIQELDKDDESLRK
⊠ YIQHTYR
prognosis
OR
PD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value
colname
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OR.01
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OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

P02787
peptide intensity (log2)
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2
0
−2
sample
AFNHAVVTR
ASYLDCIR
CDEWSVNSVGK
CSTSSLLEACTFR
DCHLAQVPSHTVVAR
DDTVCLAK
DGAGDVAFVK
DLLFRDDTVCLAK
DQYELLCLDNTR
DSAHGFLK
DSGFQMNQLR
DYELLCLDGTR
EDPQTFYYAVAVVK
EFQLFSSPHGK
EGTCPEAPTDECKPVK
EGYYGYTGAFR
FDEFFSEGCAPGSK
HQTVPQNTGGK
IMNGEADAMSLDGGFVHAGK
KASYLDCIR
KPVDEYKDCHLAQVPSHTVVAR
KPVEEYANCHLAR
LCMGSGLNLCEPNNK
LKCDEWSVNSVGK
MYLGYEYVTAIR
NLNEKDYELLCLDGTR
NPDPWAK
P02787
SAGWNIPIGLLYCDLPEPR
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WCALSHHER
WCAVSEHEATK
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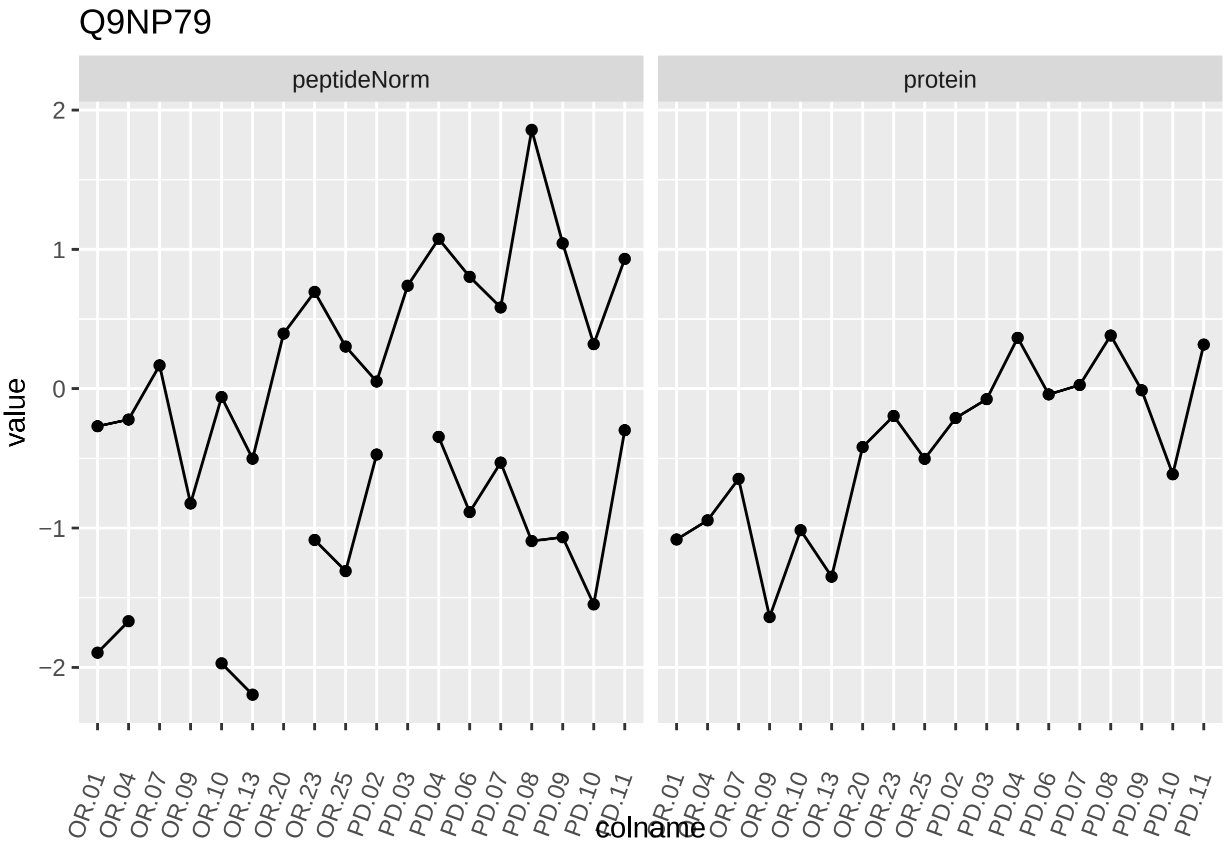
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protein
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−2
colname
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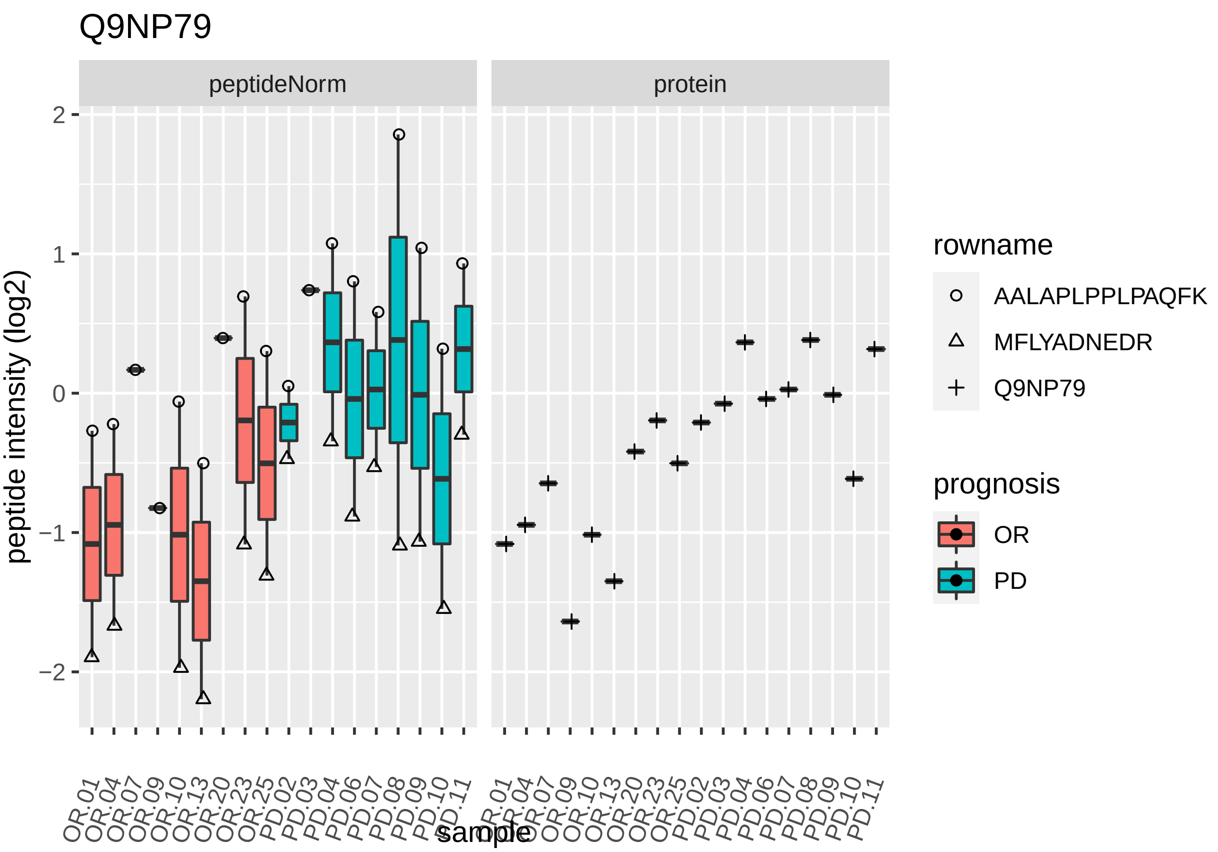
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11


Q9NP79
peptideNorm
protein
peptide intensity (log2)
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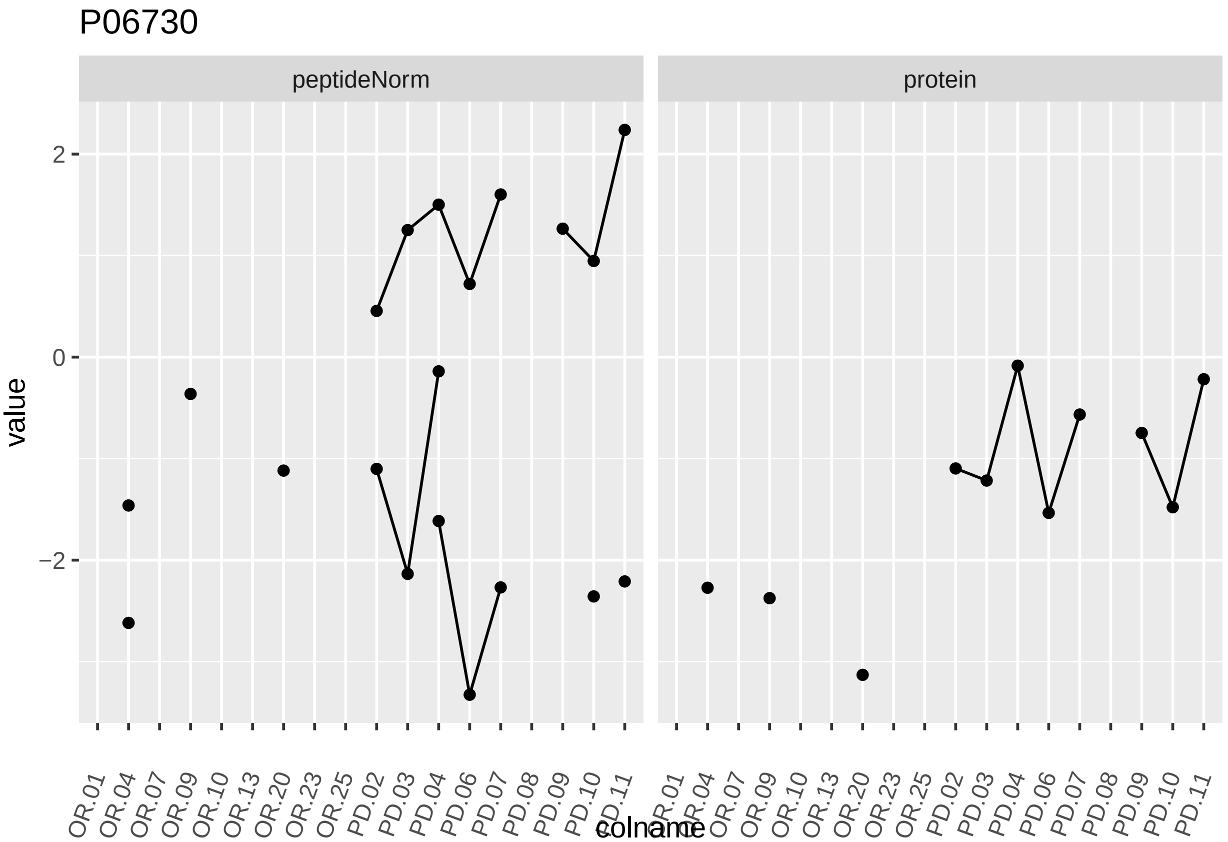
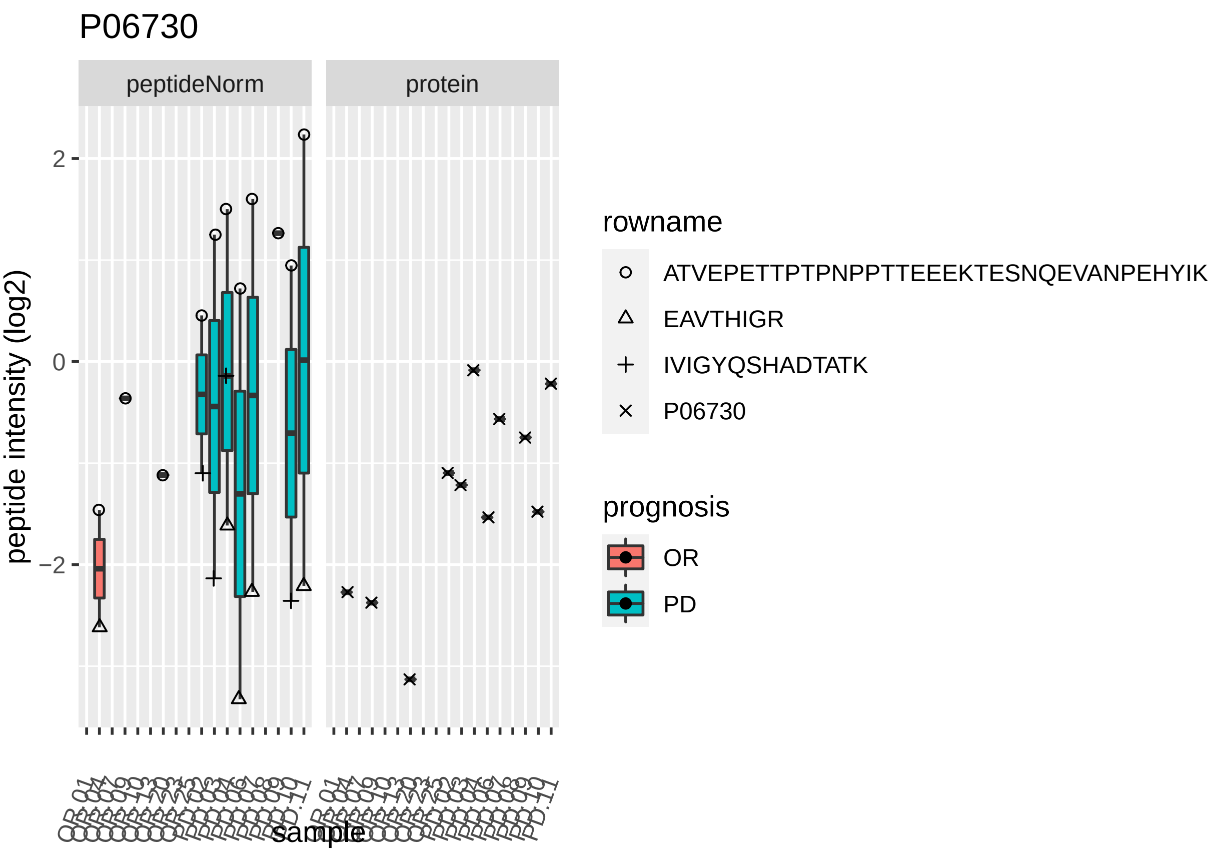
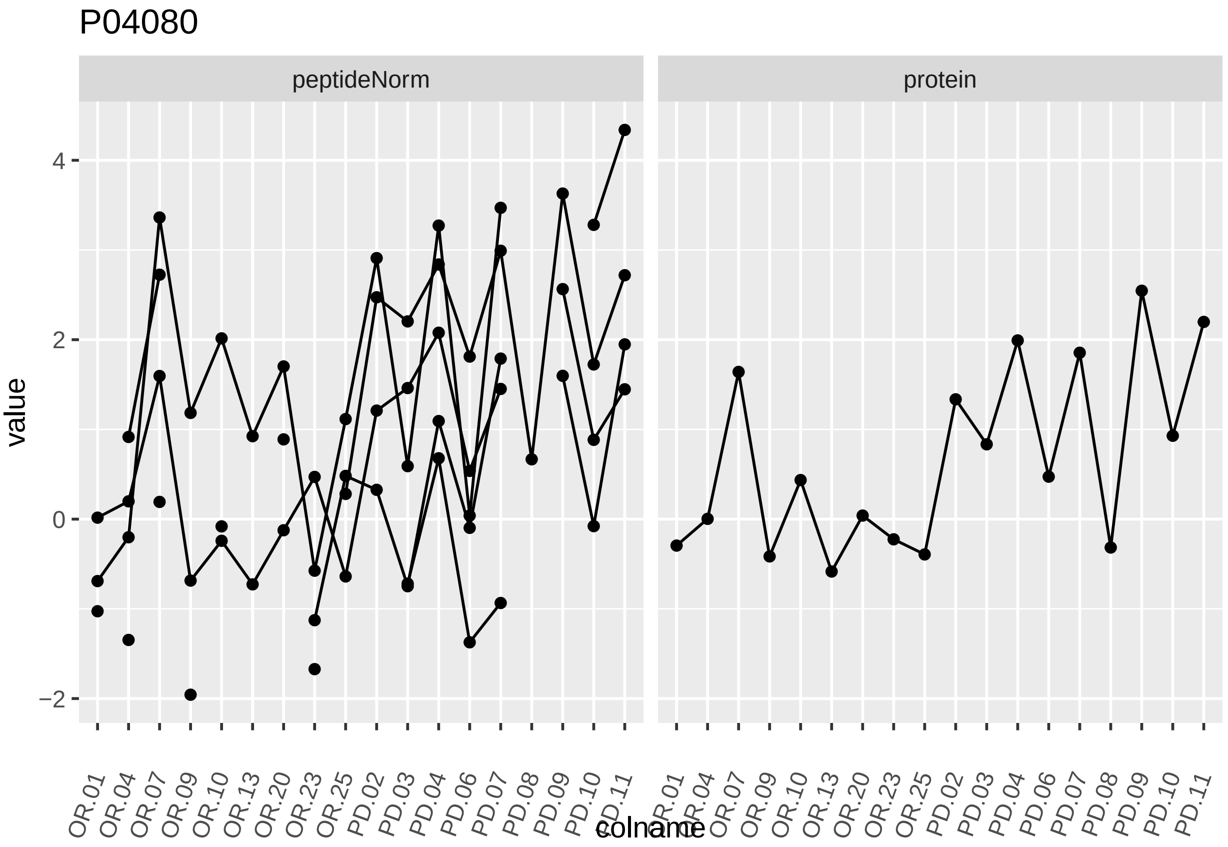
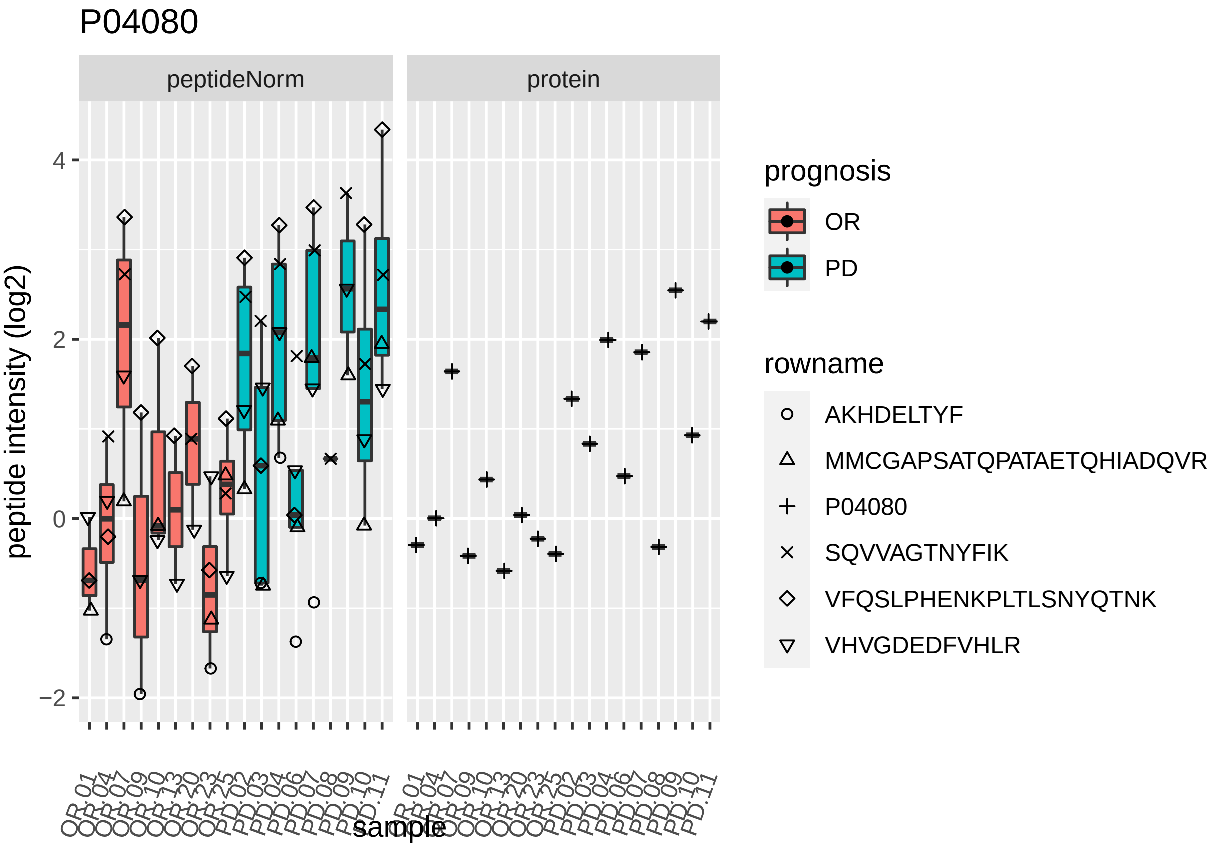
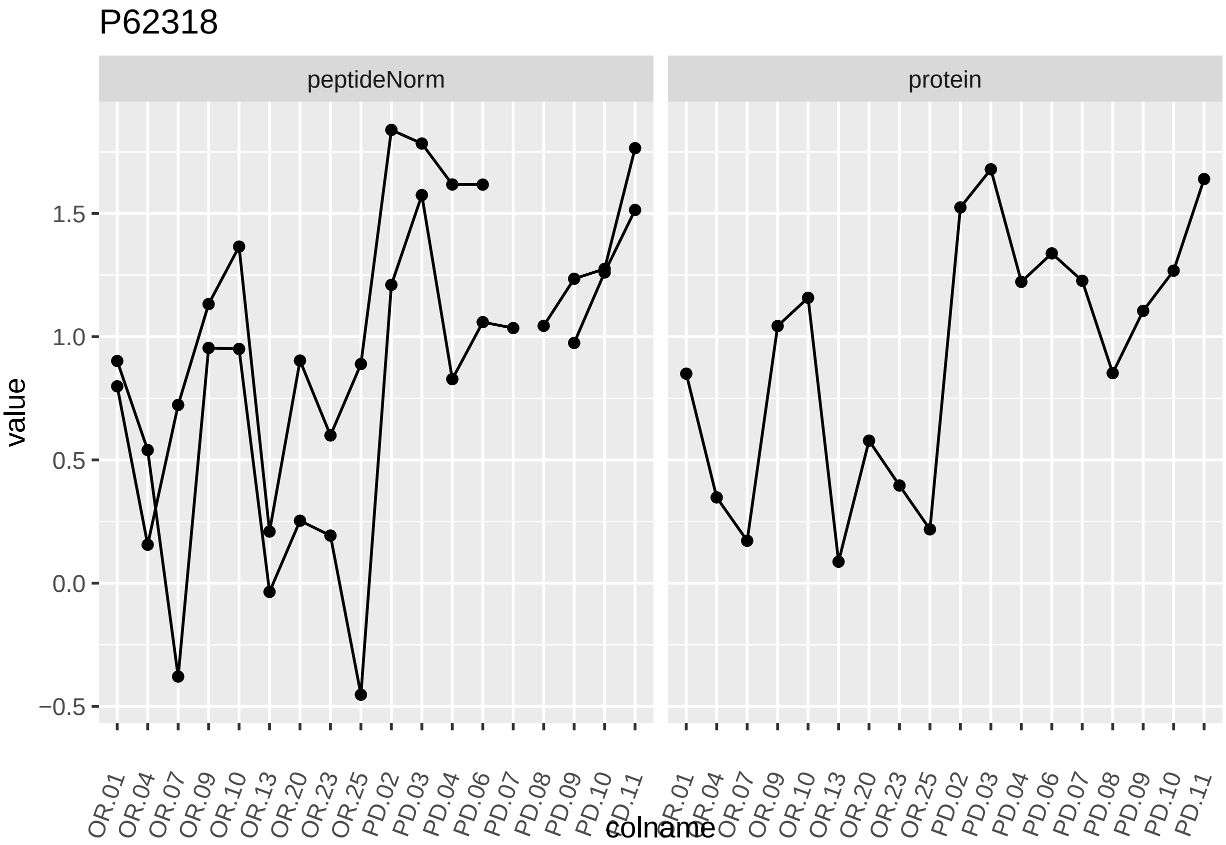
1
0
−1
−2
sample
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
rowname
AALAPLPPLPAQFK
MFLYADNEDR
Q9NP79
prognosis
OR
PD

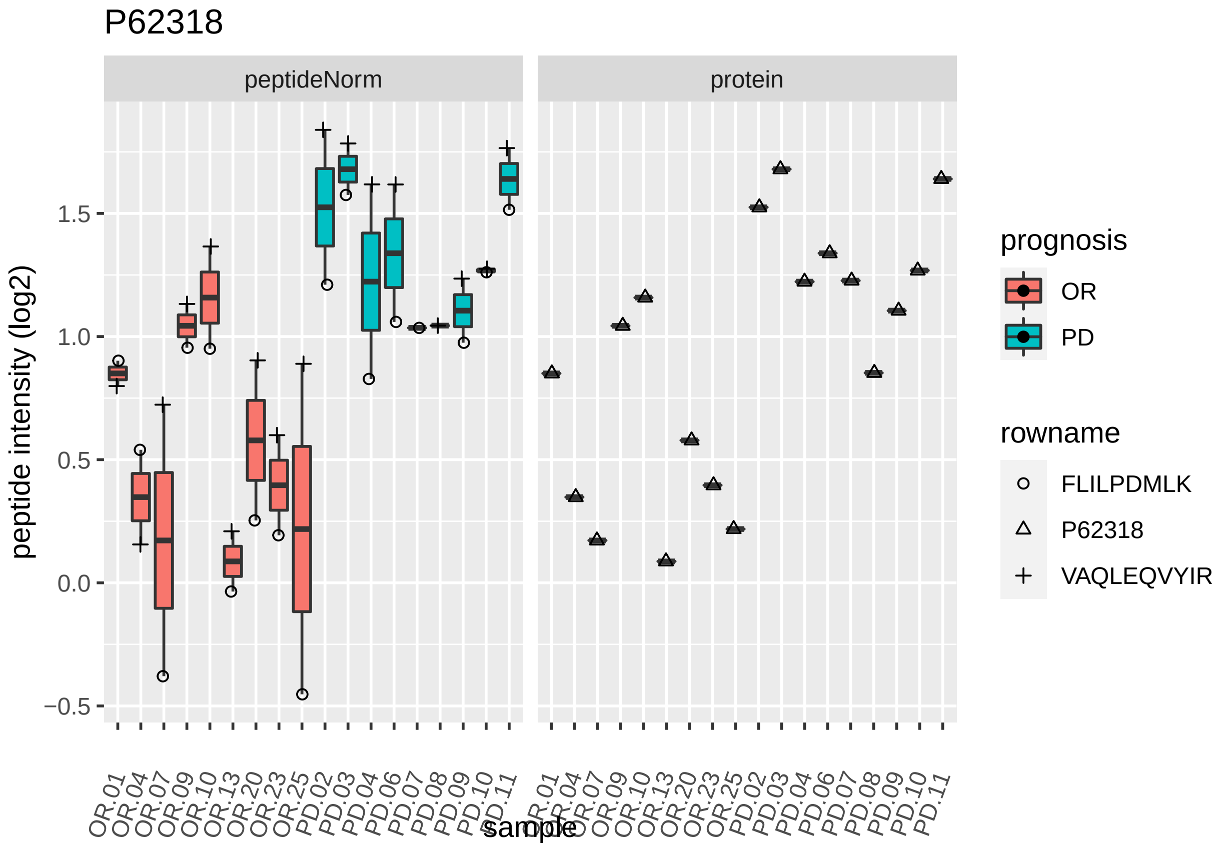

P06730
peptideNorm
protein
value
2
0
−2
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

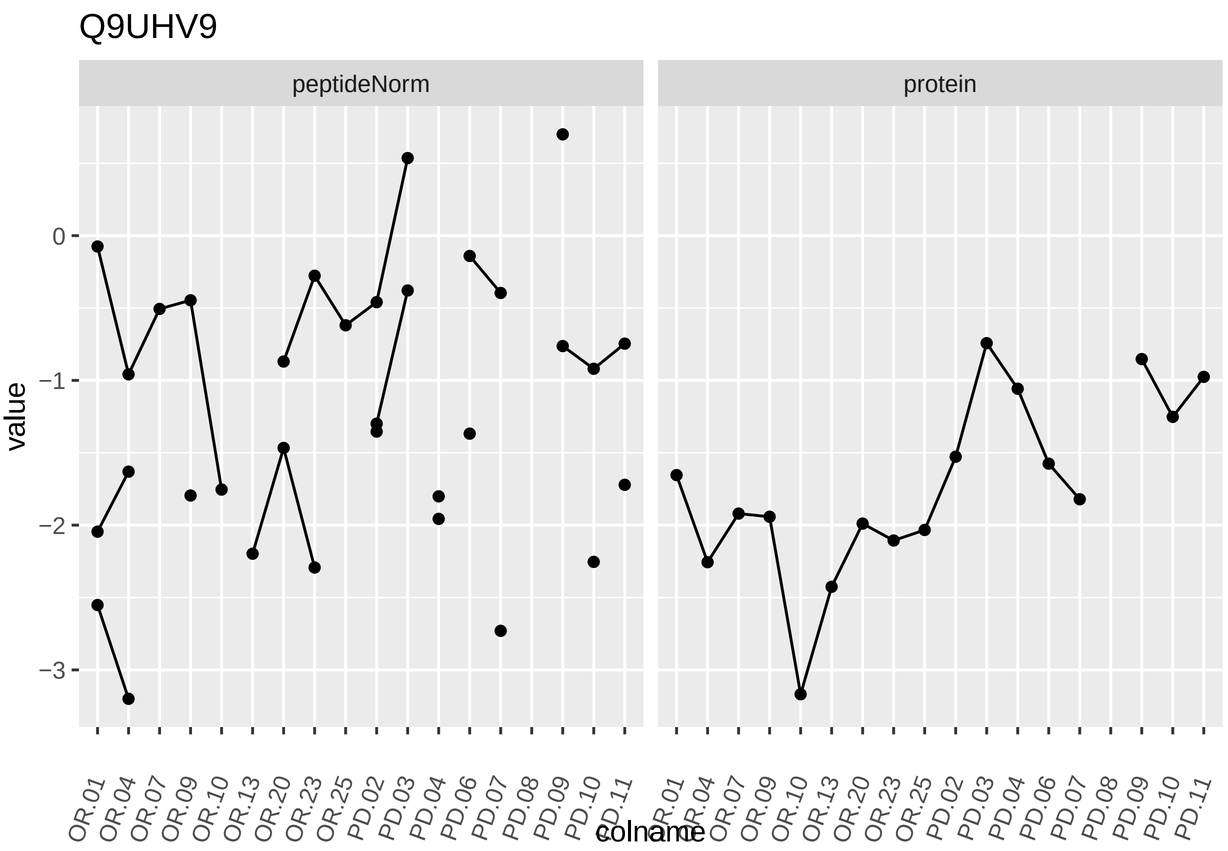

P06730
peptideNorm
protein
2
0
−2
peptide intensity (log2)
sample
rowname
○ ATVEPETTPTPNPPTTEEEKTESNQEVANPEHYIK
△ EAVTHIGR
+ IVIGYQSHADTATK
× P06730
prognosis
OR
PD

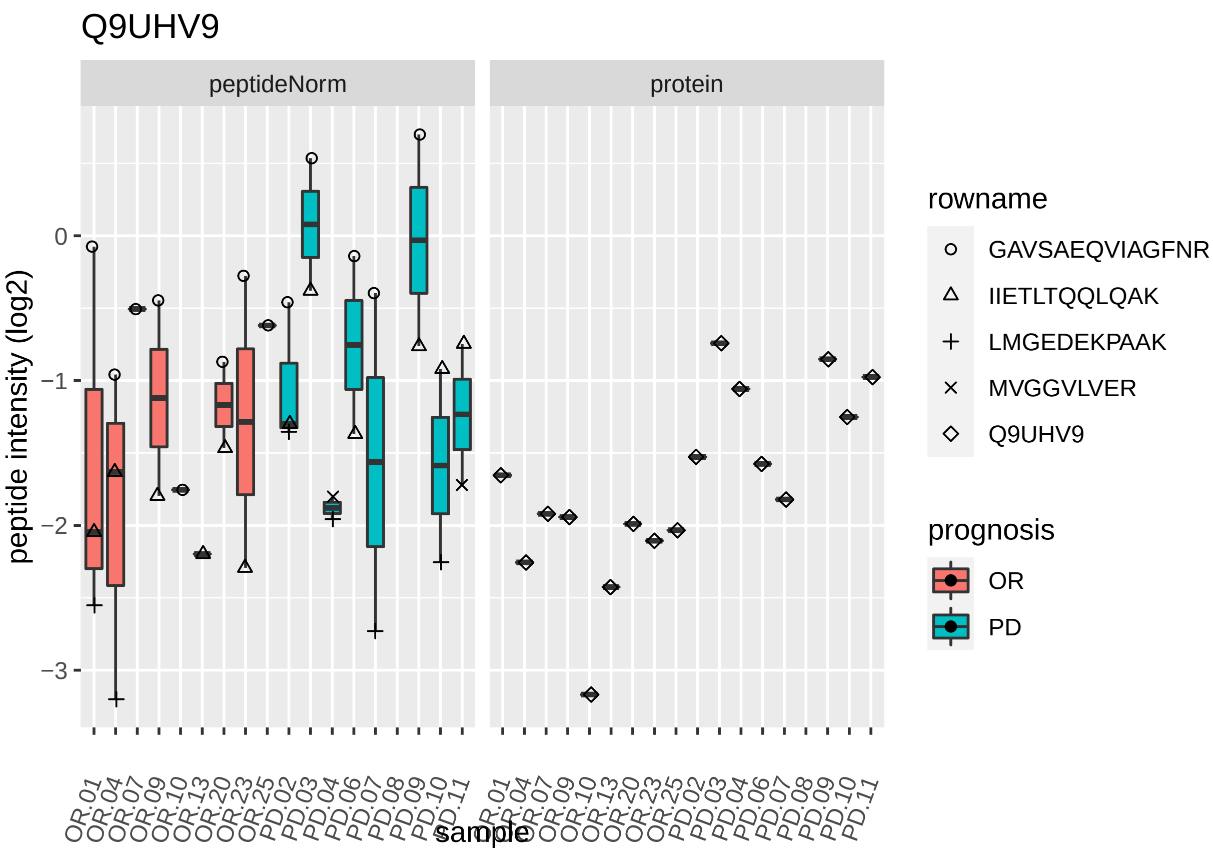

P04080
peptideNorm
protein
value
4
2
0
−2
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

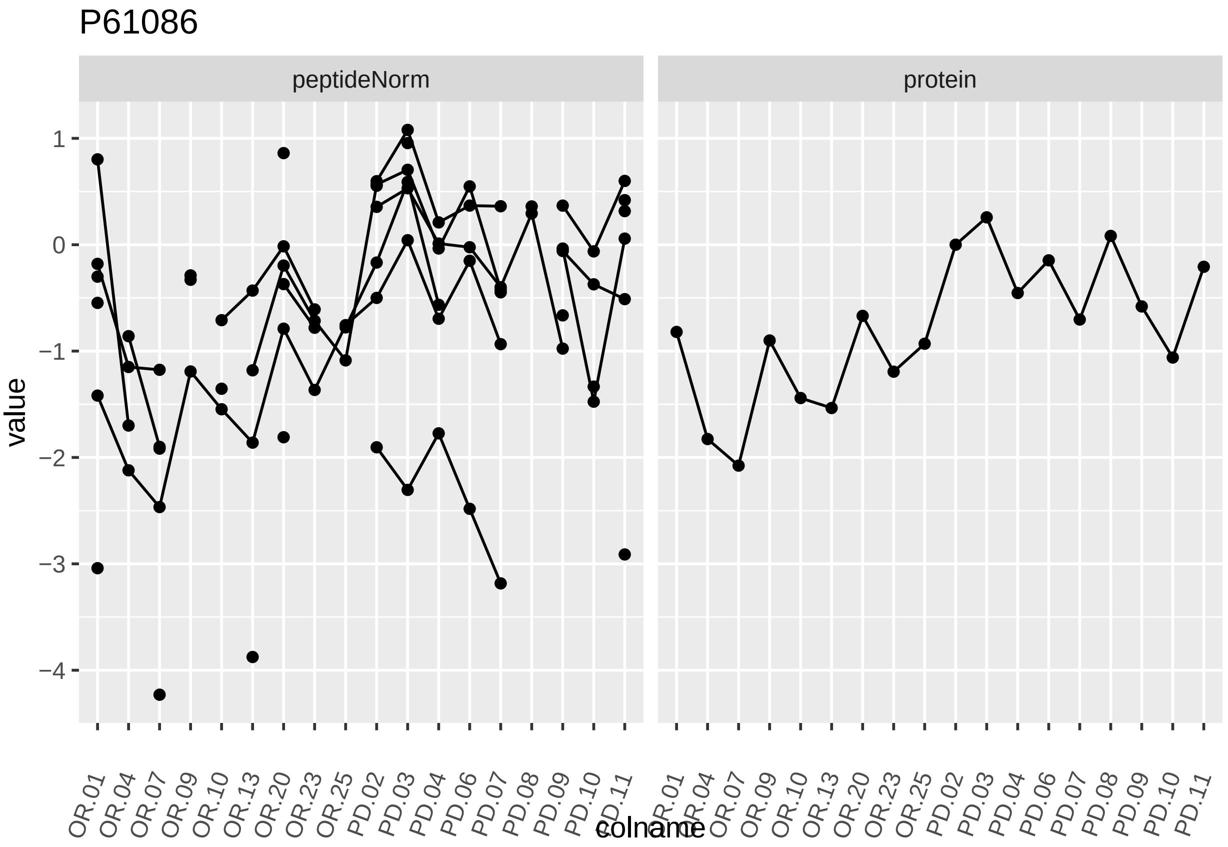

P04080
peptideNorm
protein
peptide intensity (log2)
4
2
0
−2
sample
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
prognosis
OR
PD
rowname
AKHDELTYF
MMCGAPSATQPATAETQHIADQVR
P04080
SQVVAGTNYFIK
VFQSLPHENKPLTLSNYQTNK
VHVGDEDFVHLR

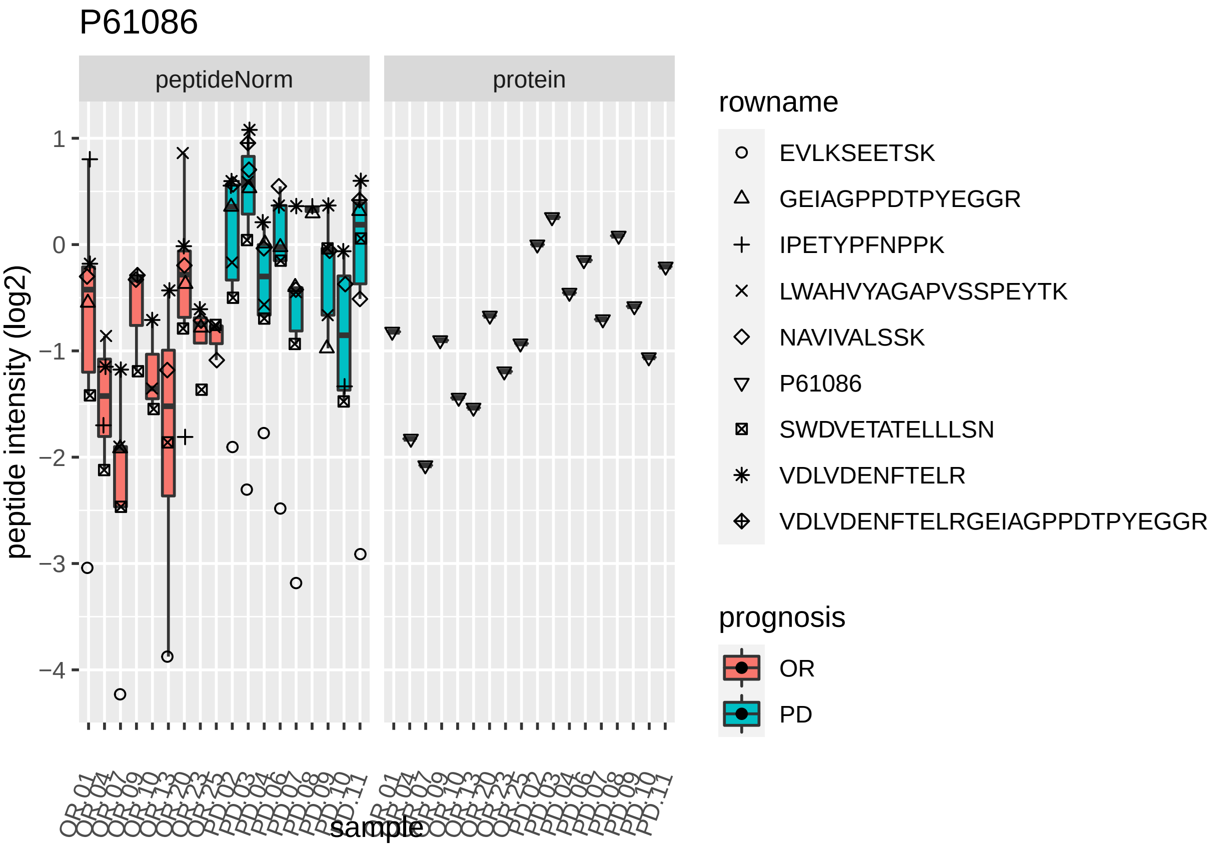

P62318
peptideNorm
protein
value
colname
1.5
1.0
0.5
0.0
−0.5
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

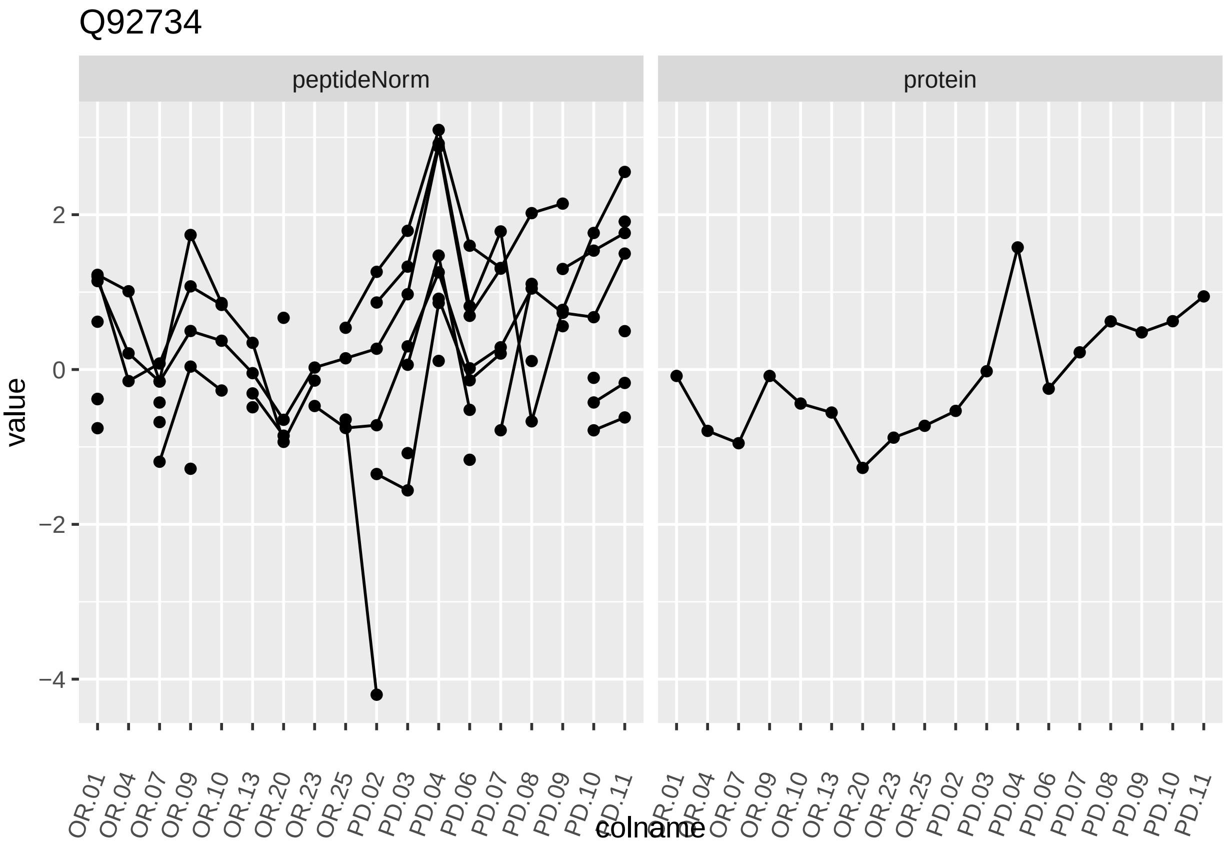

P62318
peptideNorm
protein
peptide intensity (log2)
1.5
1.0
0.5
0.0
−0.5
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
sample
prognosis
OR
PD
rowname
FLILPDMLK
P62318
VAQLEQVYIR

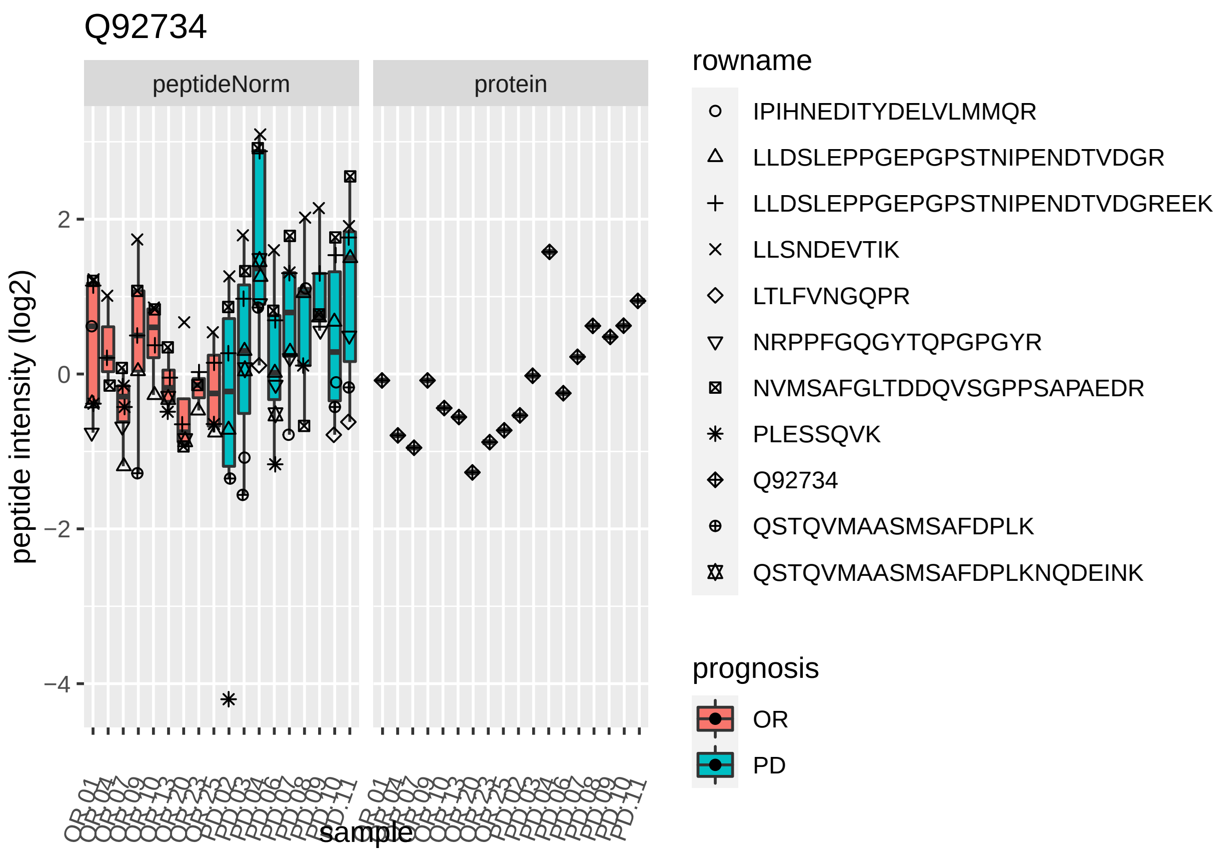

Q9UHV9
peptideNorm
protein
value
0
−1
−2
−3
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

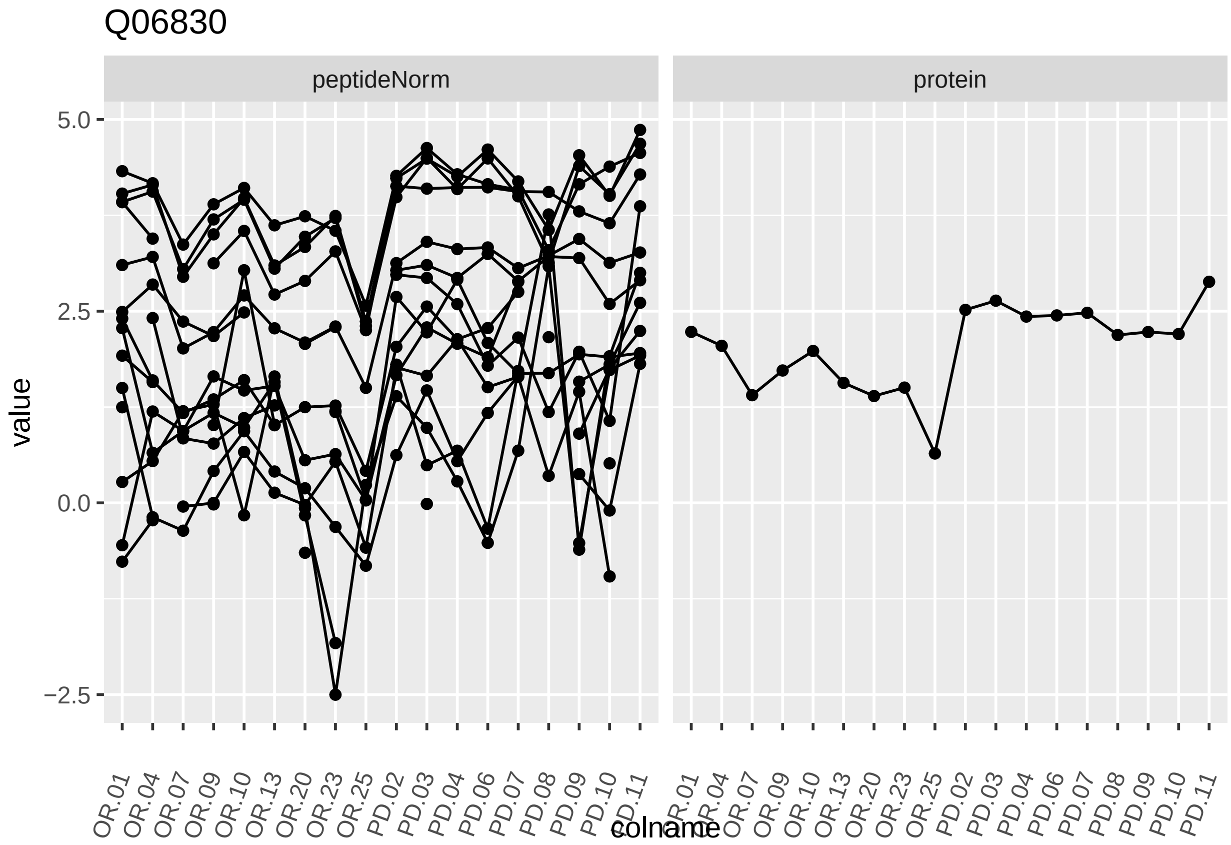

Q9UHV9
peptideNorm
protein
peptide intensity (log2)
0
−1
−2
−3
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
sample
rowname
GAVSAEQVIAGFNR
IIETLTQQLQAK
LMGEDEKPAAK
MVGGVLVER
Q9UHV9
prognosis
OR
PD

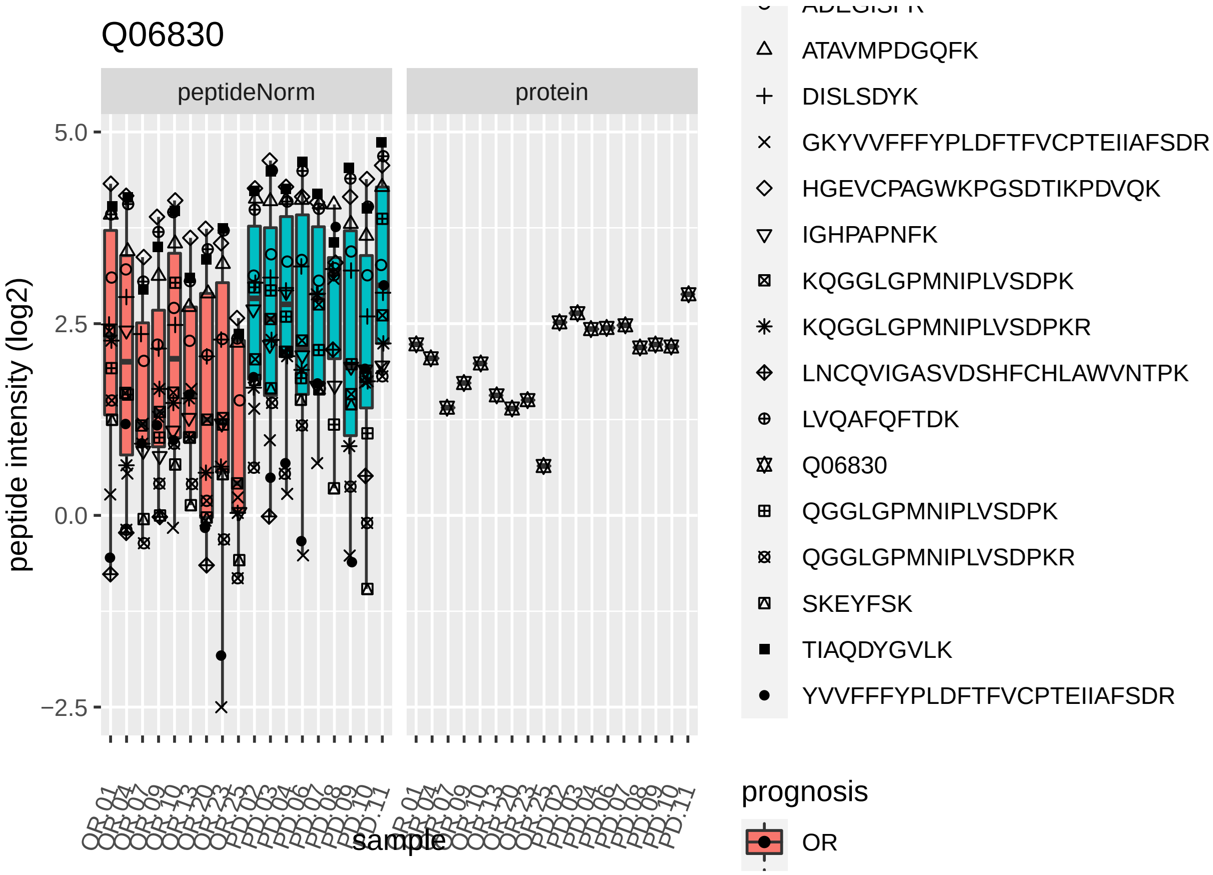

P61086
peptideNorm
protein
value
1
0
−1
−2
−3
−4
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11


P61086
peptideNorm
protein
peptide intensity (log2)
1
0
−1
−2
−3
−4
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
sample
rowname
EVLKSEETSK
GEIAGPPDTPYEGGR
IPETYPFNPPK
LWAHVYAGAPVSSPEYTK
NAVIVALSSK
P61086
SWDVETATELLLSN
VDLVDENFTELR
VDLVDENFTELRGEIAGPPDTPYEGGR
prognosis
OR
PD

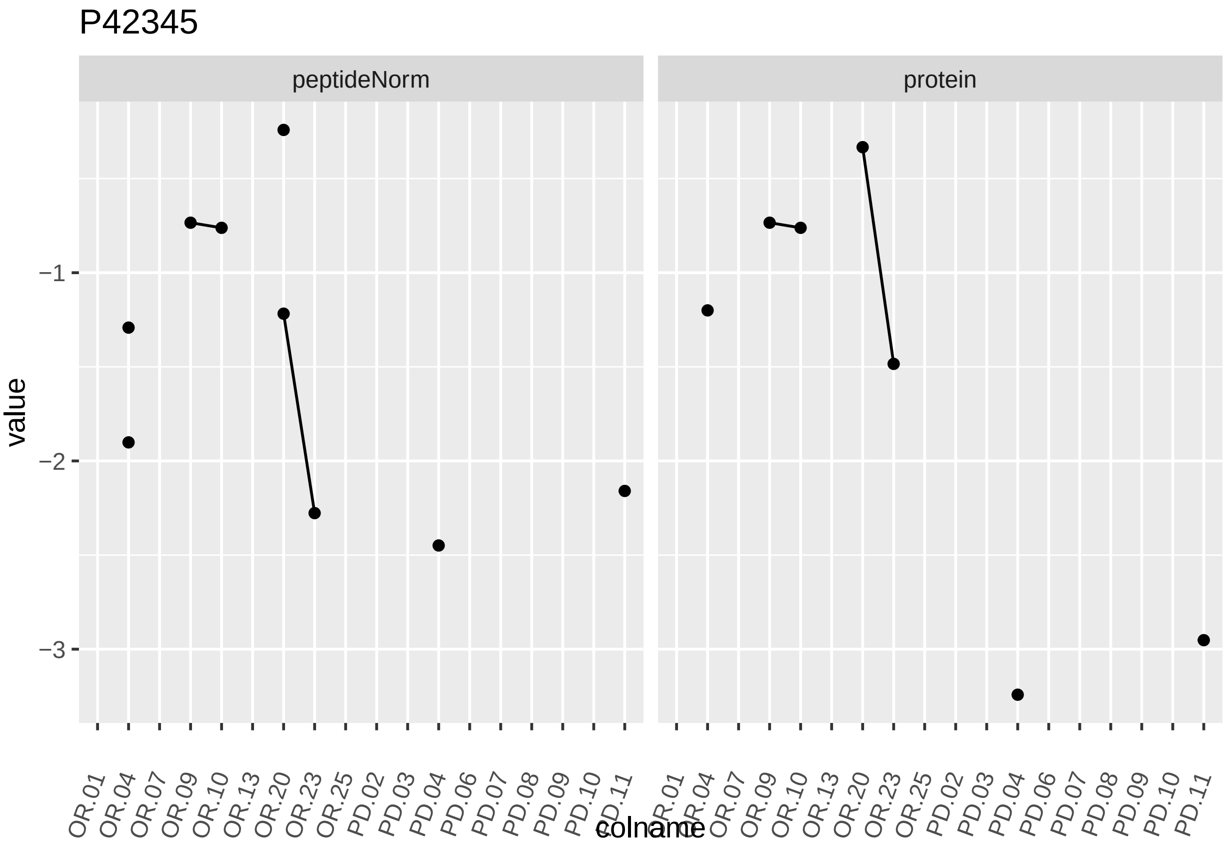

Q92734
peptideNorm
protein
value
2
0
−2
−4
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
colname

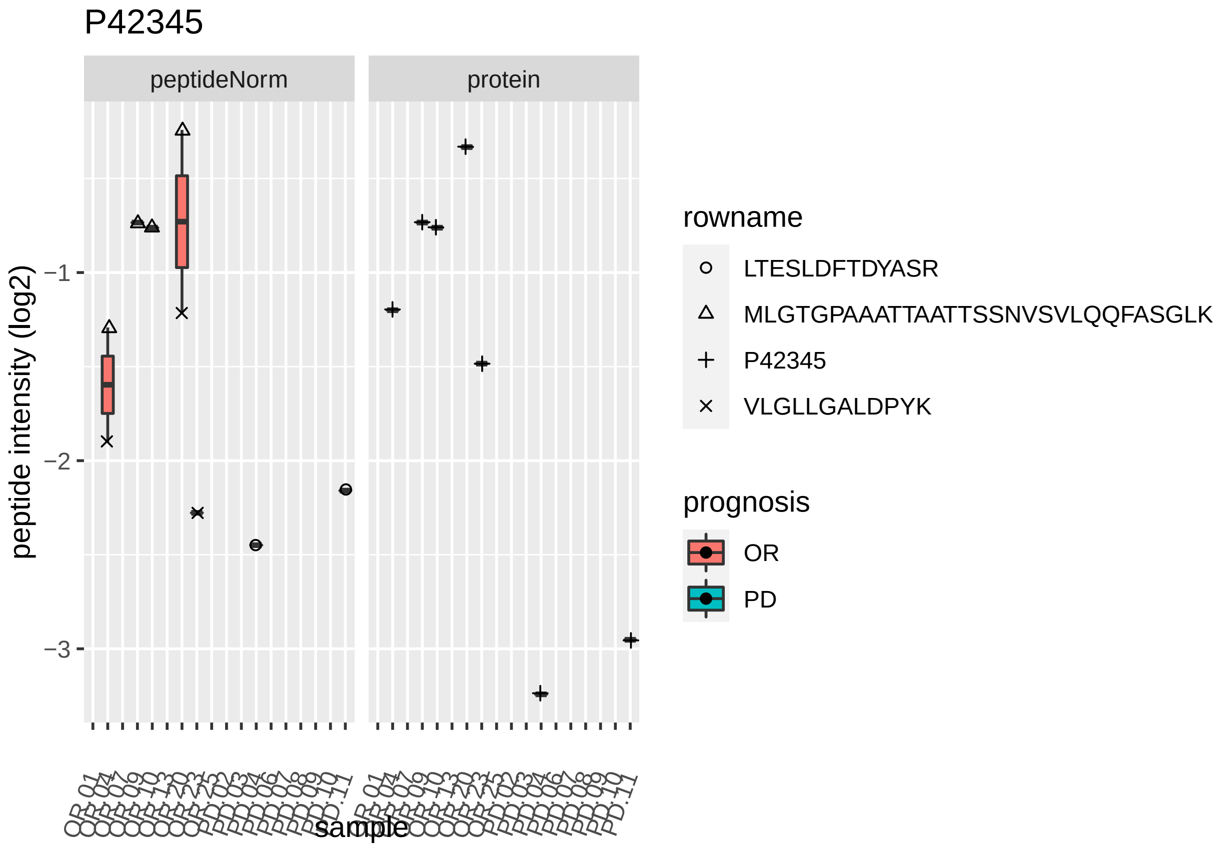

Q92734
peptideNorm
protein
peptide intensity (log2)
2
0
−2
−4
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
sample
rowname
○ IPIHNEDITYDELVLMMQR
△ LLDSLEPPGEPGPSTNIPENDTVDGR
+ LLDSLEPPGEPGPSTNIPENDTVDGREEK
× LLSNDEVTIK
◇ LTLFVNGQPR
▽ NRPPFGQGYTQPGPGYR
⊠ NVMSAFGLTDDQVSGPPSAPAEDR
✳ PLESSQVK
⯐ Q92734
⊕ QSTQVMAASMSAFDPLK
✡ QSTQVMAASMSAFDPLKNQDEINK
prognosis
🟥 OR
🟦 PD

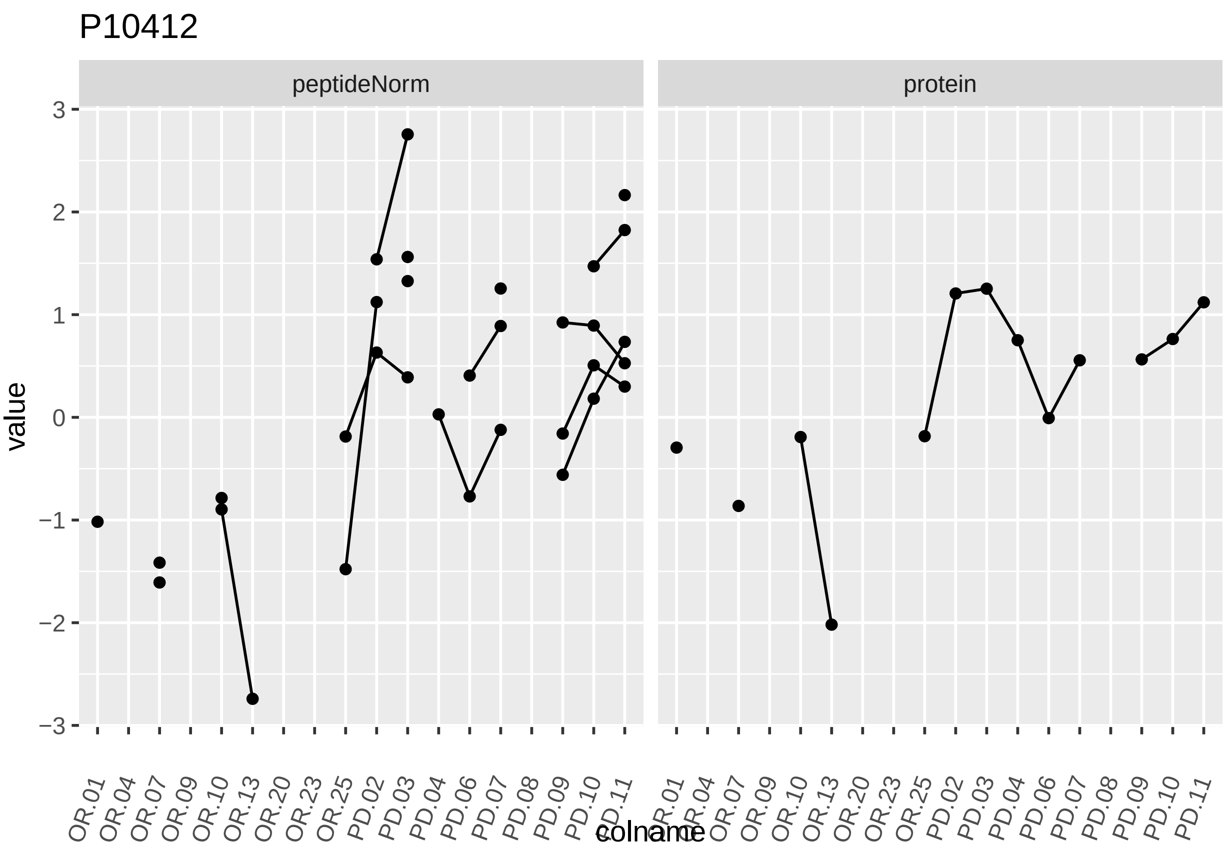

Q06830
peptideNorm
protein
value
5.0
2.5
0.0
−2.5
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

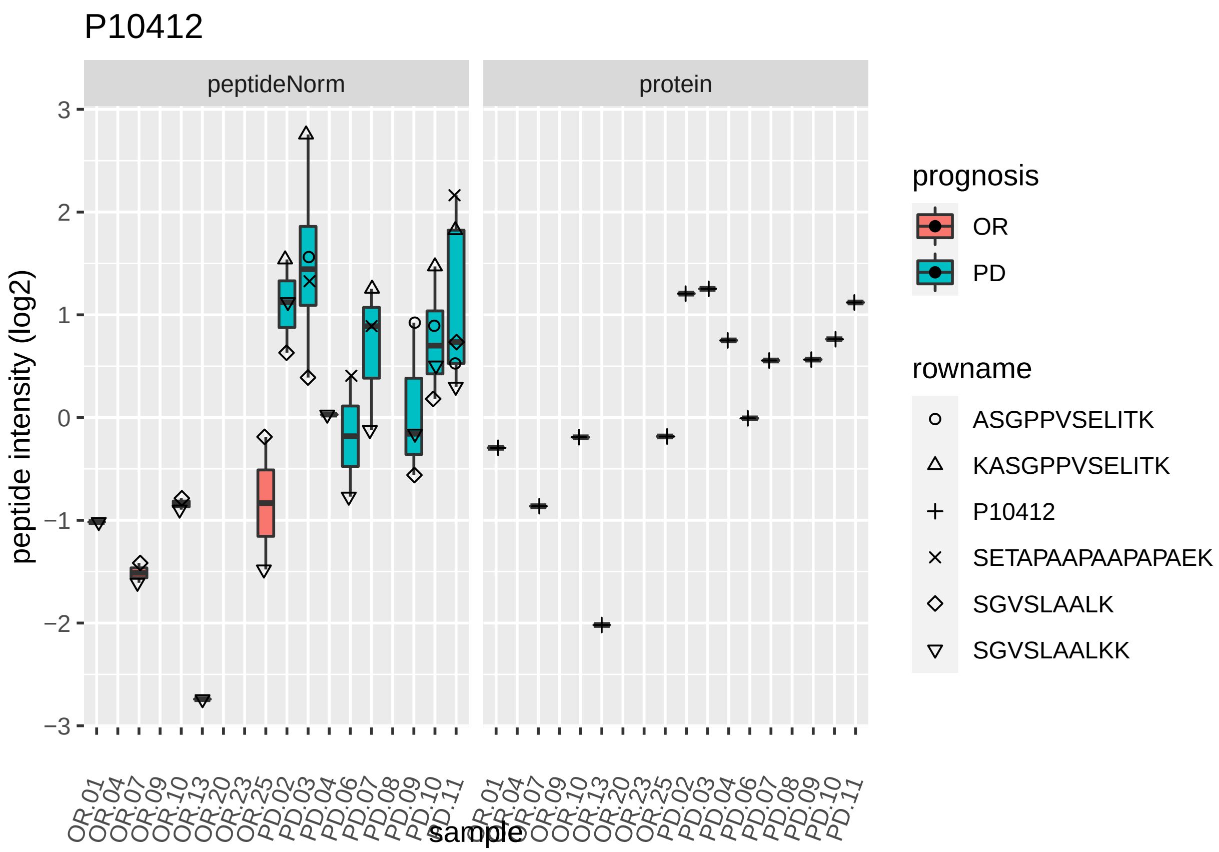


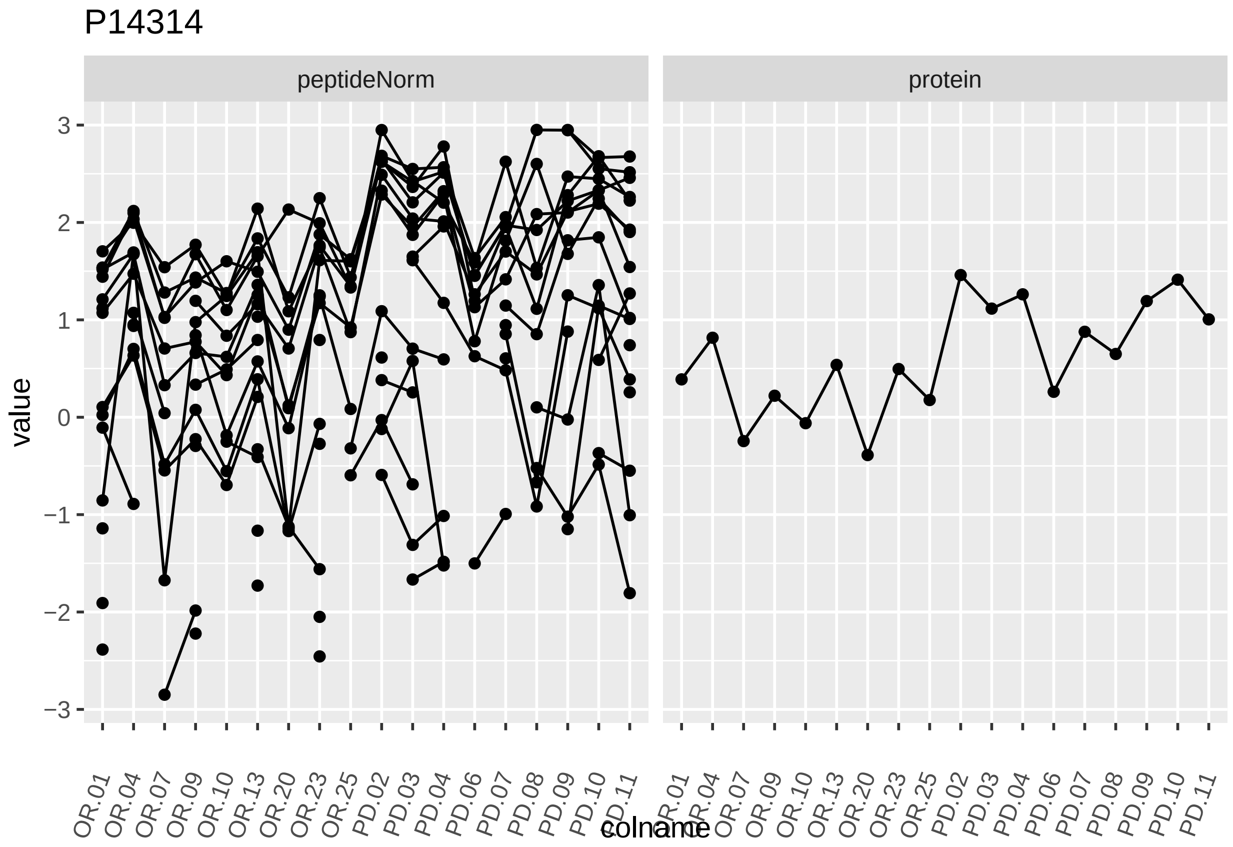
Q06830
peptideNorm
protein
peptide intensity (log2)
5.0
2.5
0.0
−2.5
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
sample
ADLGISFK
ATAVMPDGQFK
DISLSDYK
GKYVVFFFYPLDFTFVCPTEIIAFSDR
HGEVCPAGWKPGSDTIKPDVQK
IGHPAPNFK
KQGGLGPMNIPLVSDPK
KQGGLGPMNIPLVSDPKR
LNCQVIGASVDSHFCHLAWVNTPK
LVQAFQFTDK
Q06830
QGGLGPMNIPLVSDPK
QGGLGPMNIPLVSDPKR
SKEYFSK
TIAQDYGVLK
YVVFFFYPLDFTFVCPTEIIAFSDR
prognosis
OR

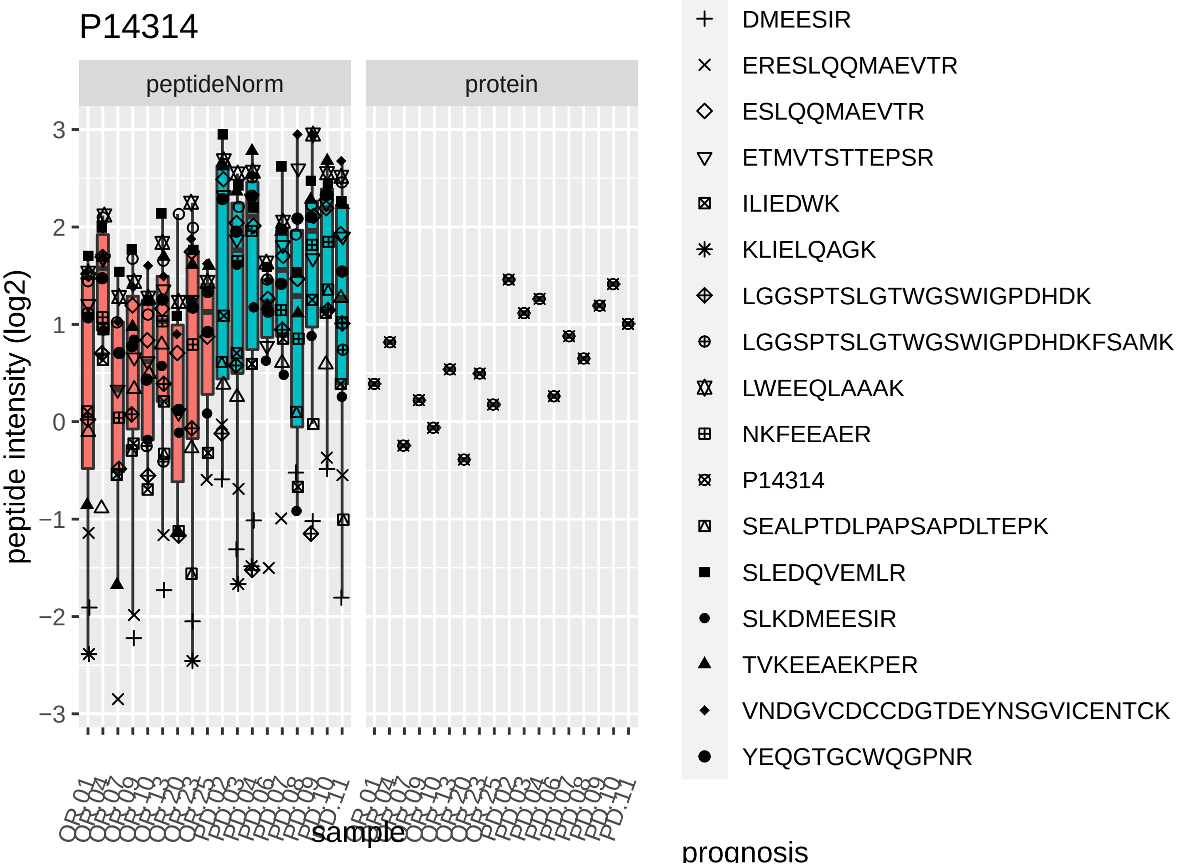

P42345
peptideNorm
protein
value
−1
−2
−3
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

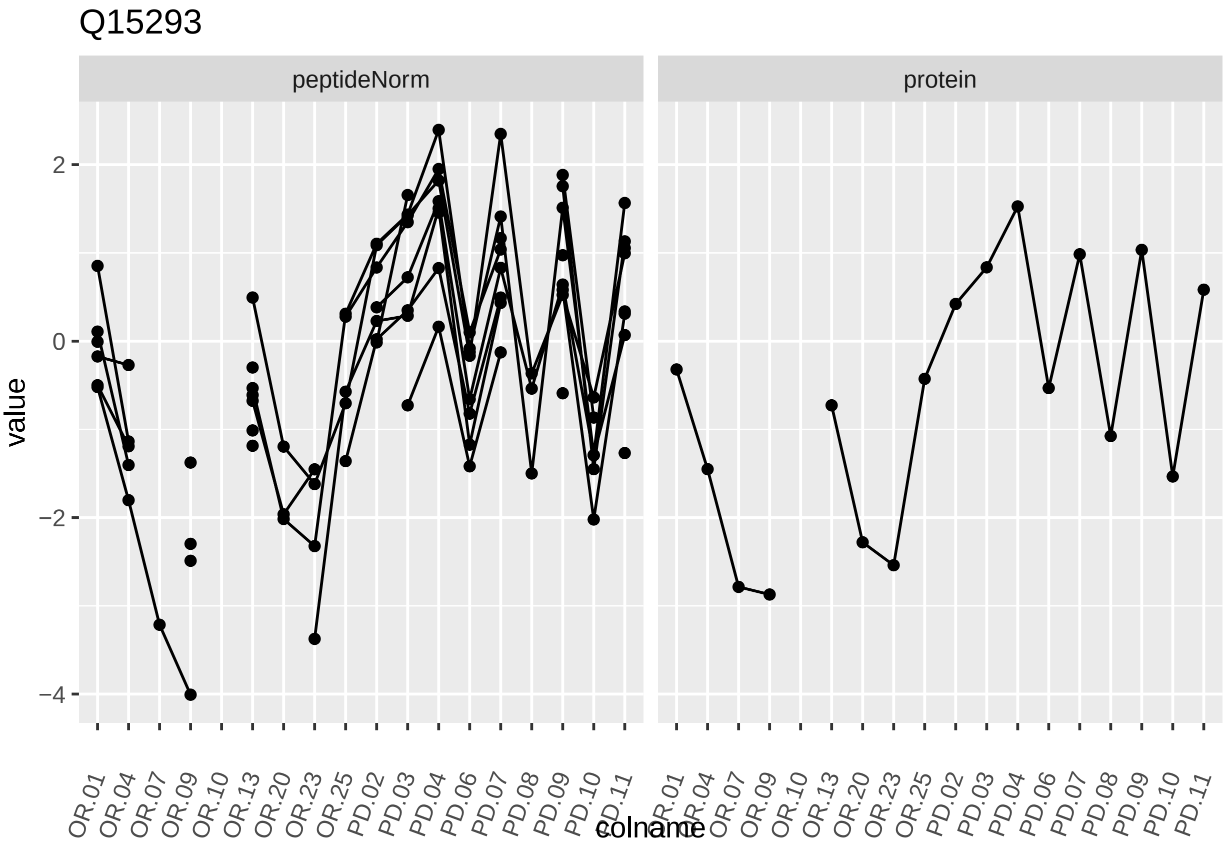

P42345
peptideNorm
protein
peptide intensity (log2)
−1
−2
−3
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
sample
rowname
○ LTESLDFTDYASR
△ MLGTGPAAATTAATTSSNVSVLQQFASGLK
+ P42345
× VLGLLGALDPYK
prognosis
🟥 OR
🟦 PD

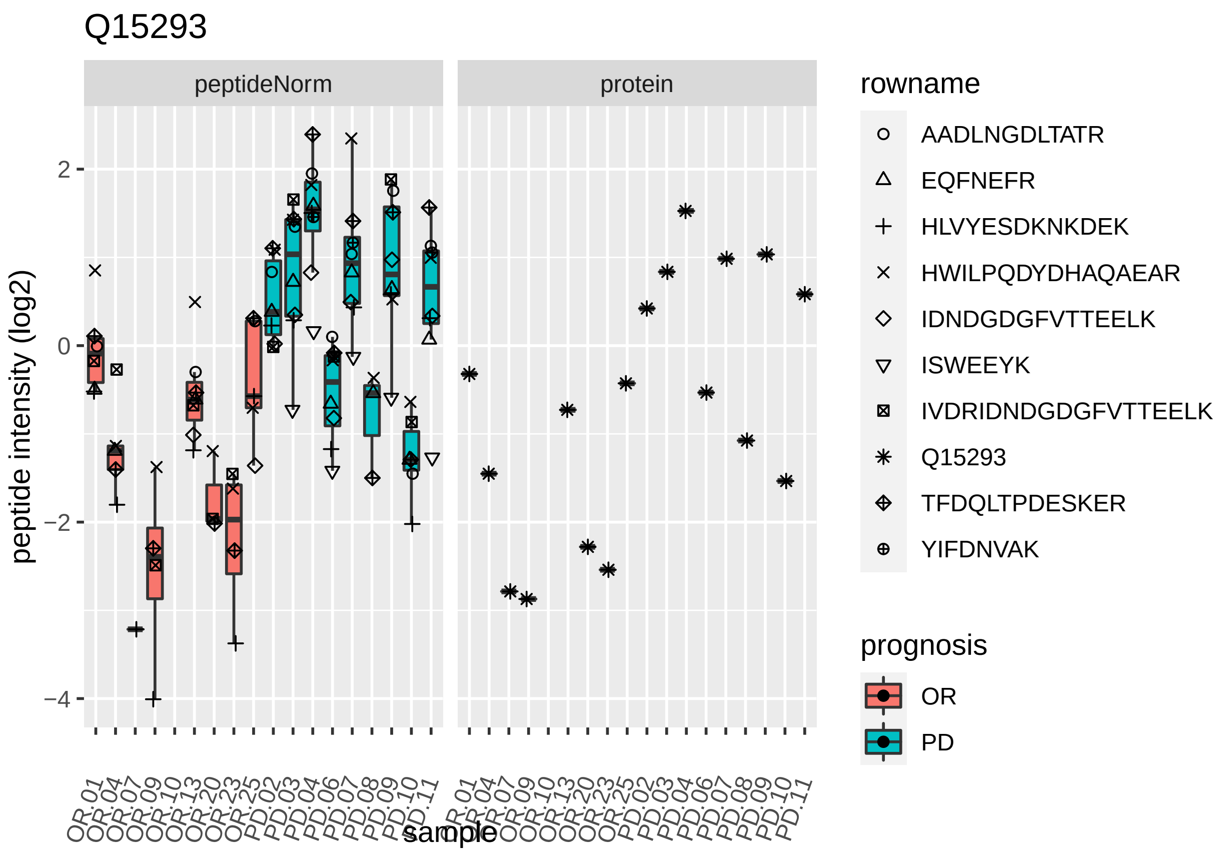

P10412
peptideNorm
protein
value
3
2
1
0
−1
−2
−3
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

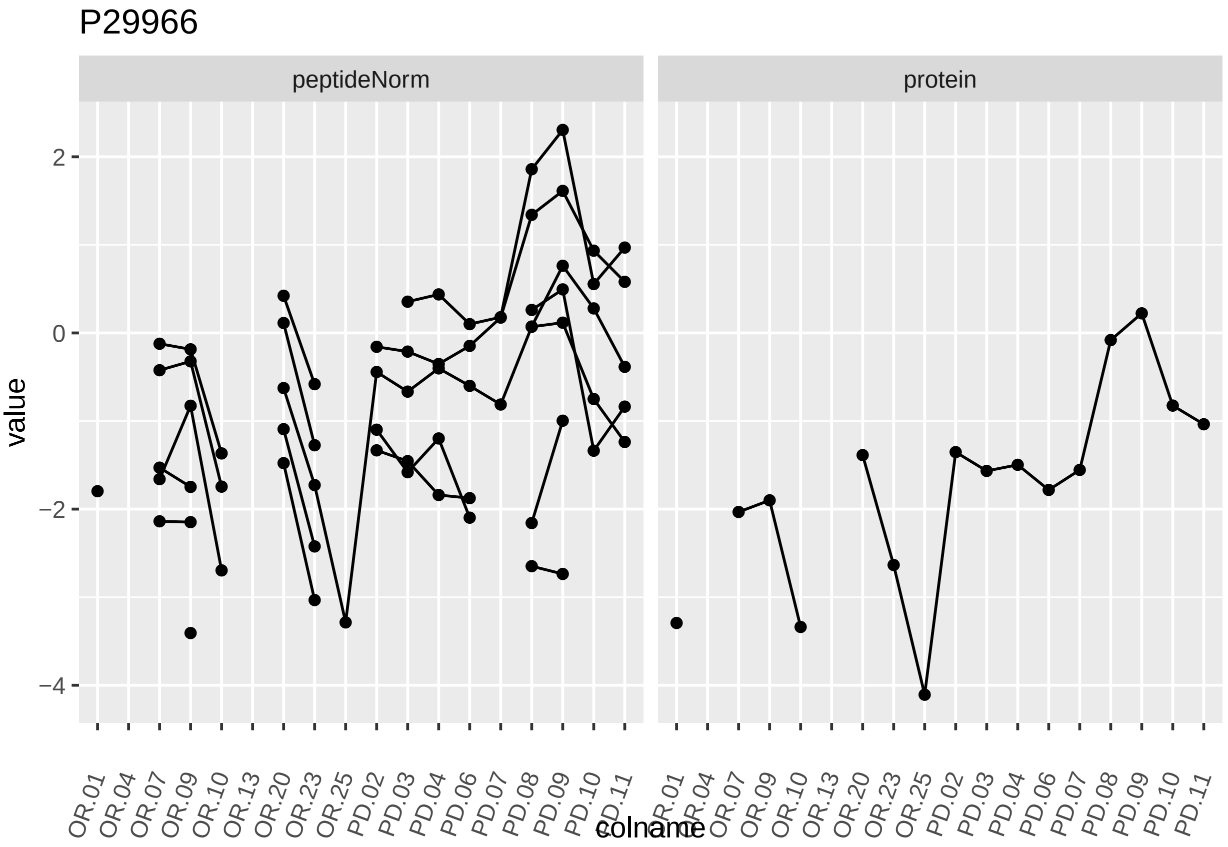

P10412
peptideNorm
protein
peptide intensity (log2)
3
2
1
0
−1
−2
−3
sample
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
prognosis
OR
PD
rowname
ASGPPVSELITK
KASGPPVSELITK
P10412
SETAPAAPAAPAPAEK
SGVSLAALK
SGVSLAALKK

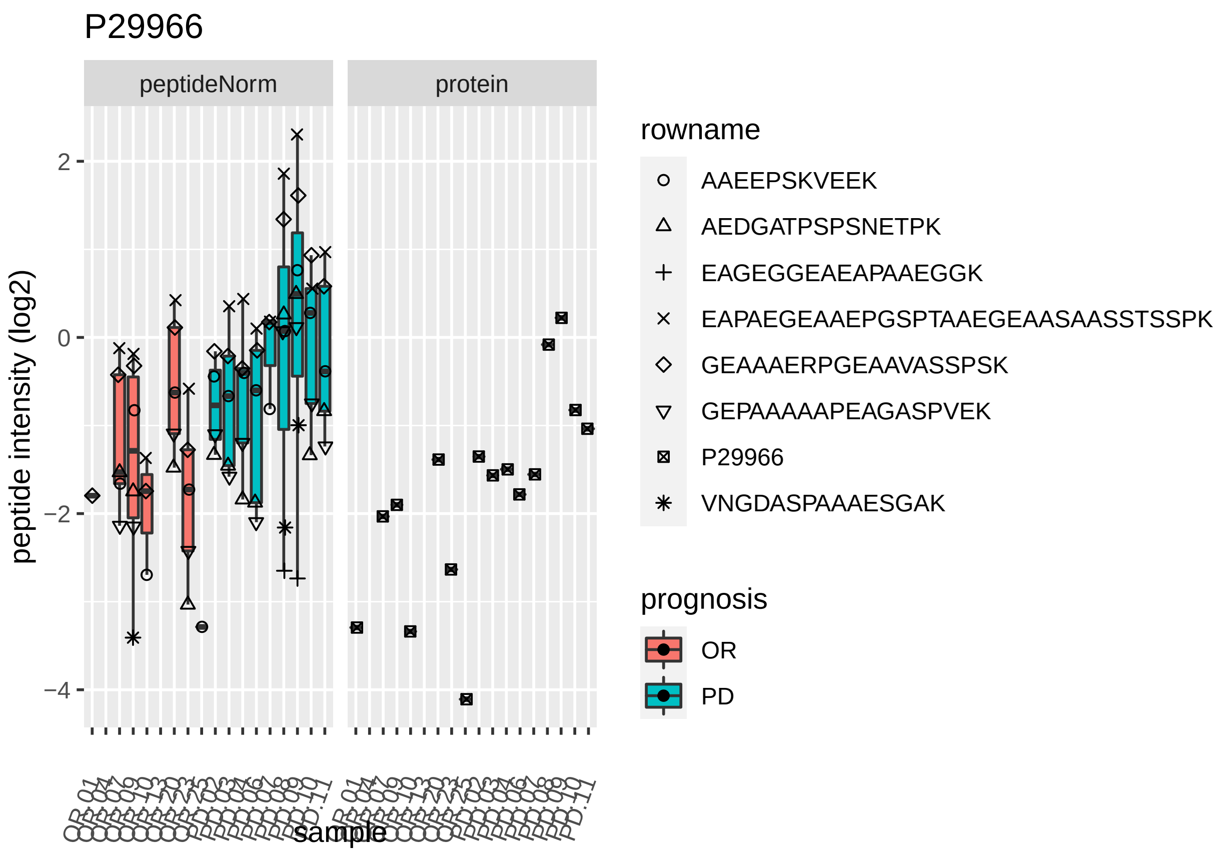

P14314
peptideNorm
protein
value
3
2
1
0
−1
−2
−3
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

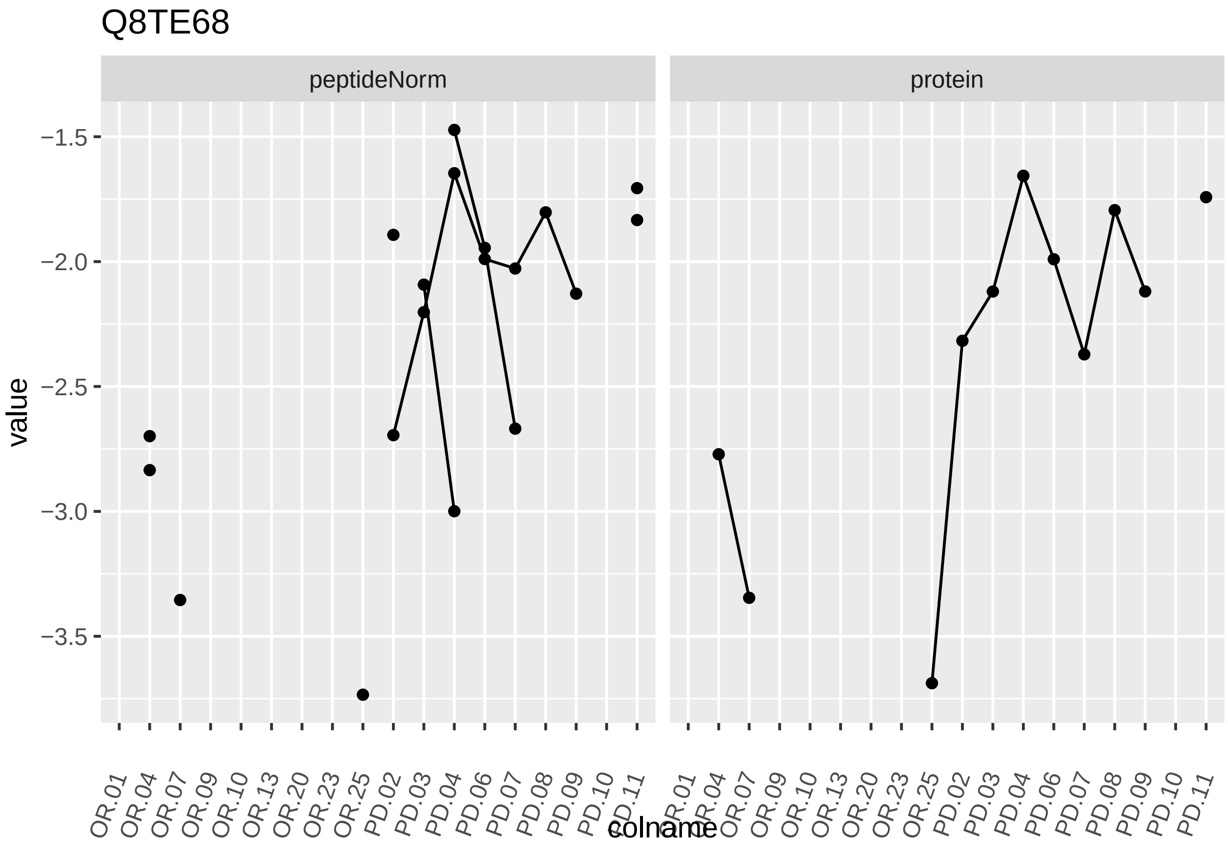

P14314
peptideNorm
protein
peptide intensity (log2)
3
2
1
0
−1
−2
−3
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
sample
+ DMEESIR
× ERESLQQMAEVTR
◇ ESLQQMAEVTR
▽ ETMVTSTTEPSR
⊠ ILIEDWK
✳ KLIELQAGK
LGGSPTSLGTWGSWIGPDHDK
⊕ LGGSPTSLGTWGSWIGPDHDKFSAMK
✡ LWEEQLAAAK
⊞ NKFEEAER
P14314
SEALPTDLPAPSAPDLTEPK
■ SLEDQVEMLR
● SLKDMEESIR
▲ TVKEEAEKPER
◆ VNDGVCDCCDGTDEYNSGVICENTCK
● YEQGTGCWQGPNR
prognosis

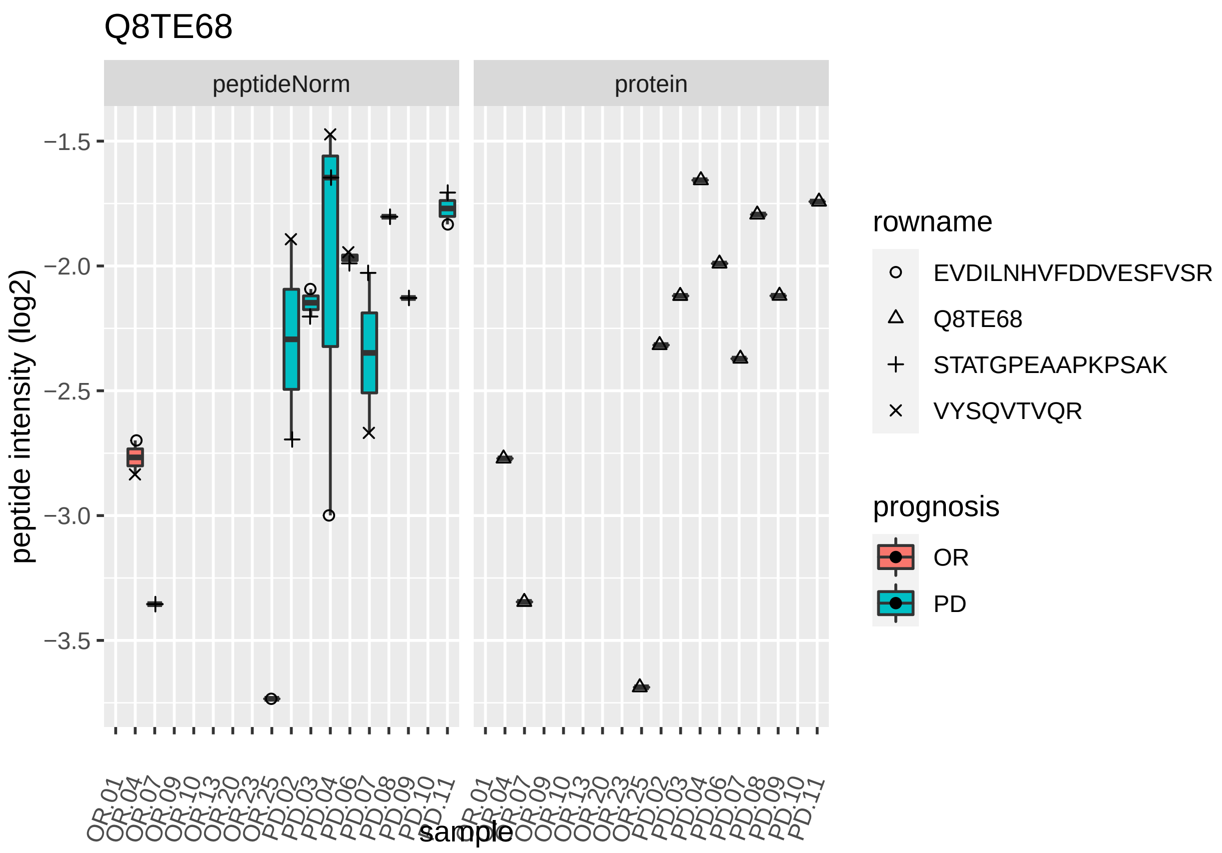

Q15293
peptideNorm
protein
value
2
0
−2
−4
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11


Q15293
peptideNorm
protein
peptide intensity (log2)
2
0
−2
−4
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
sample
rowname
AADLNGDLTATR
EQFNEFR
HLVYESDKNKDEK
HWILPQDYDHAQAEAR
IDNDGDGFVTTEELK
ISWEEYK
IVDRIDNDGDGFVTTEELK
Q15293
TFDQLTPDESKER
YIFDNVAK
prognosis
OR
PD

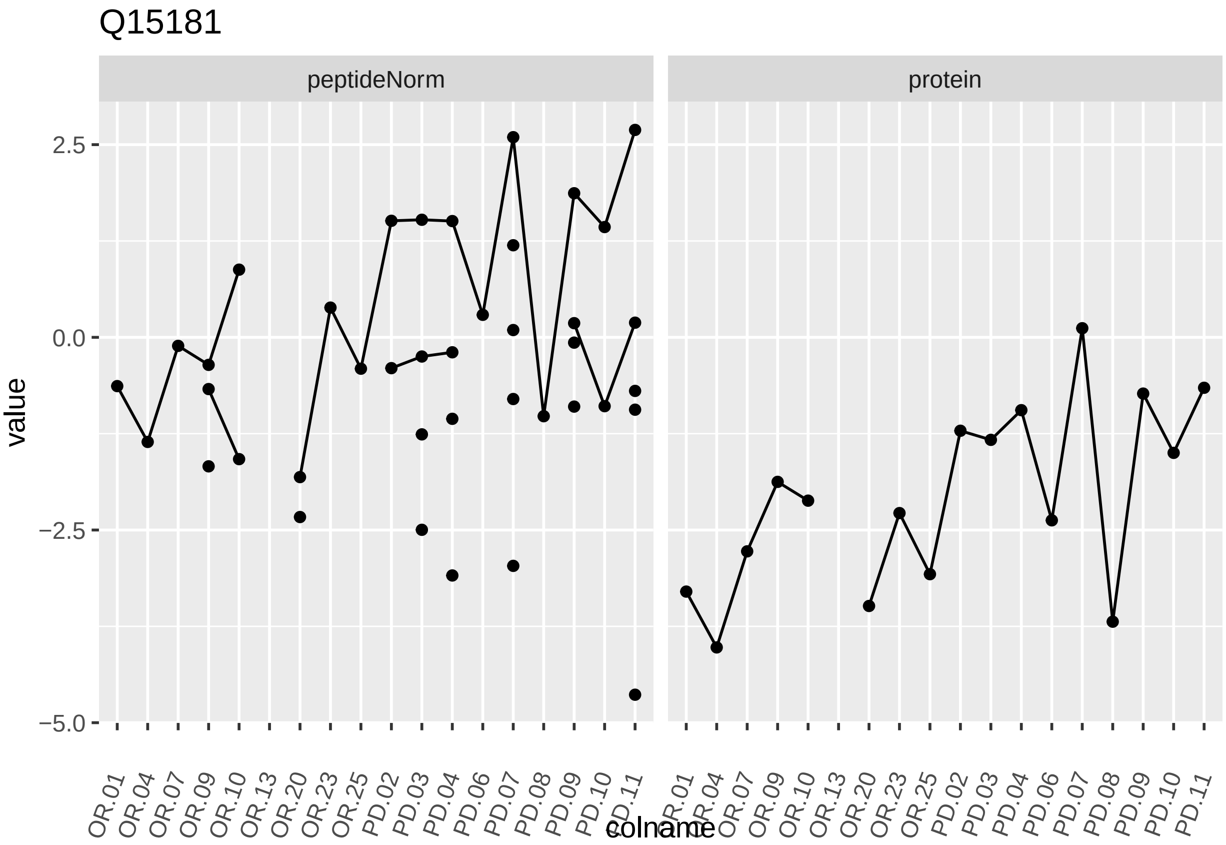

P29966
peptideNorm
protein
value
2
0
−2
−4
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

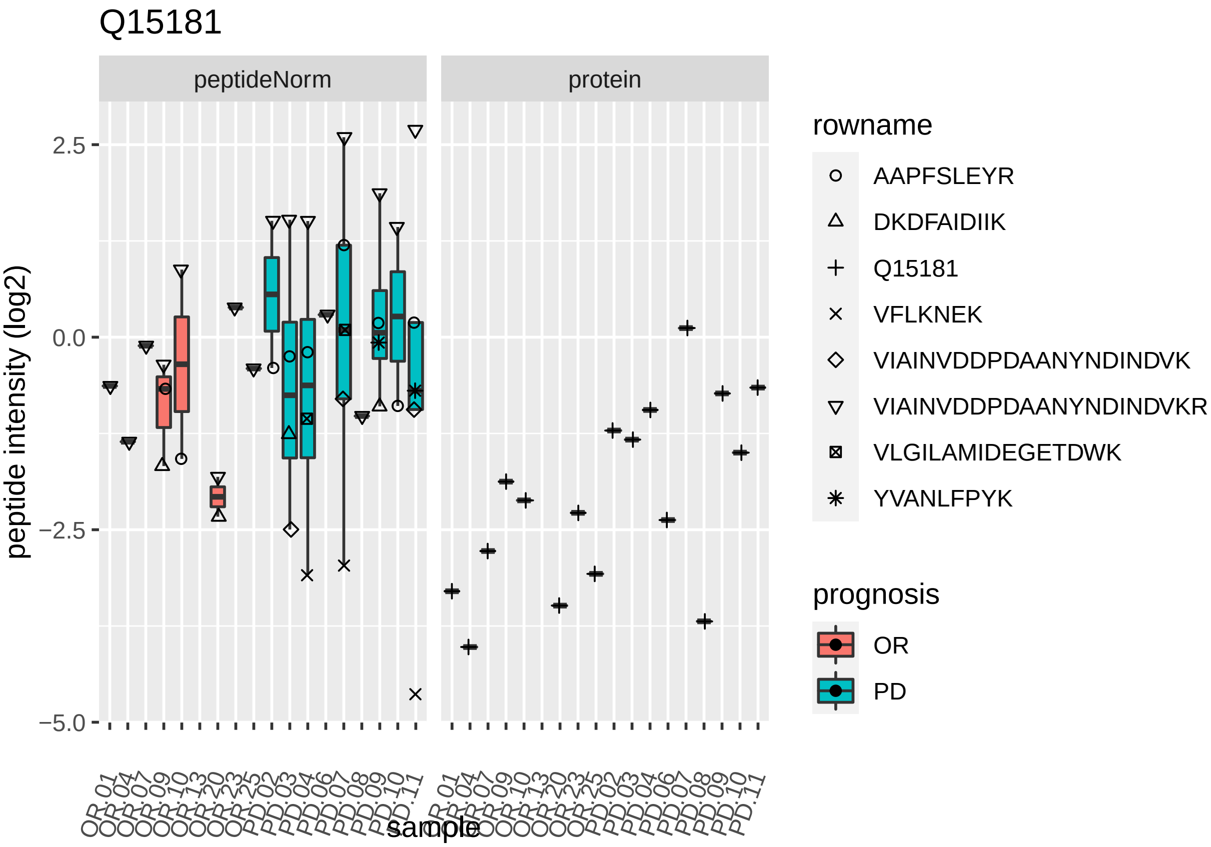

P29966
peptideNorm
protein
peptide intensity (log2)
2
0
−2
−4
OR.01
PD.11
sample
rowname
○ AAEEPSKVEEK
△ AEDGATPSPSNETPK
+ EAGEGGEAEAPAAEGGK
× EAPAEGEAAEPGSPTAAEGEAASAASSTSSPK
◇ GEAAAERPGEAAVASSPSK
▽ GEPAAAAAPEAGASPVEK
⊠ P29966
✳ VNGDASPAAAESGAK
prognosis
🟥 OR
🟦 PD

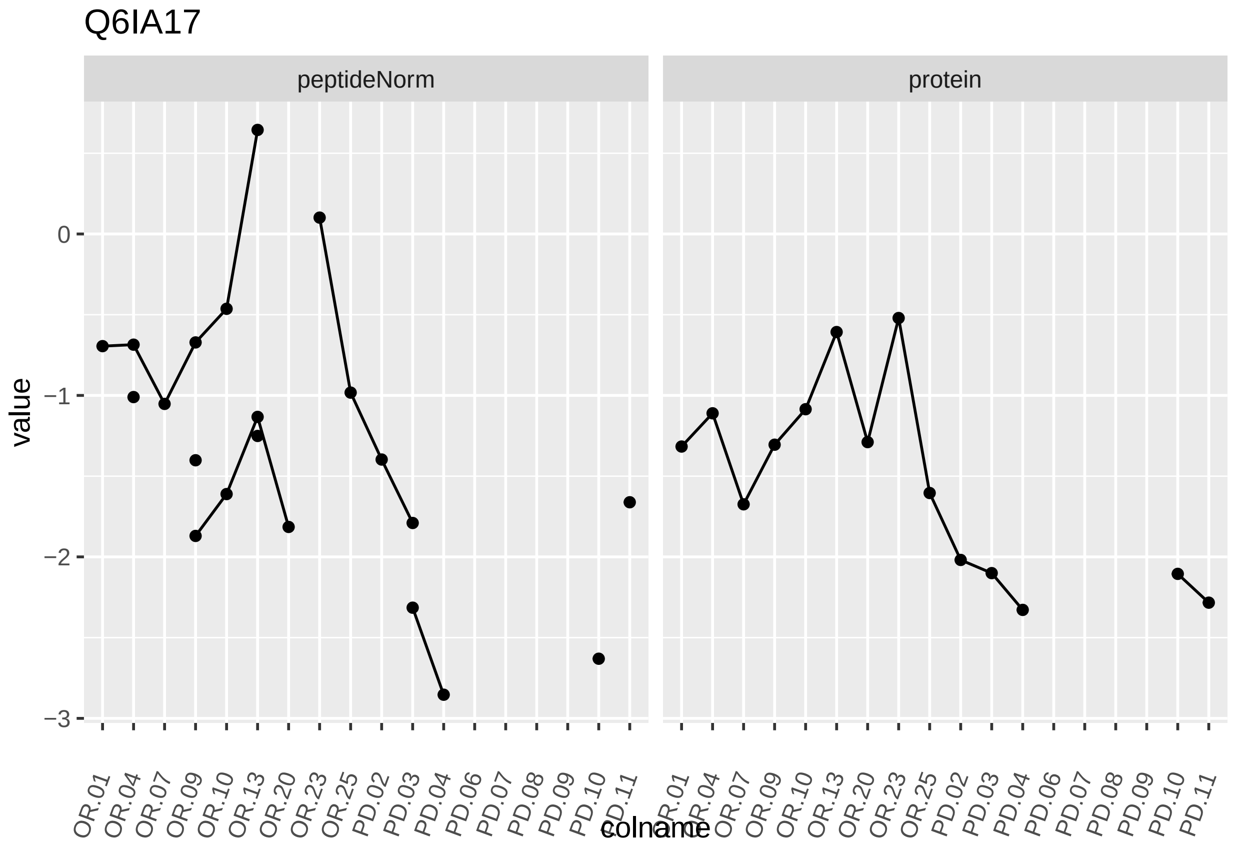

Q8TE68
peptideNorm
protein
value
−1.5
−2.0
−2.5
−3.0
−3.5
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

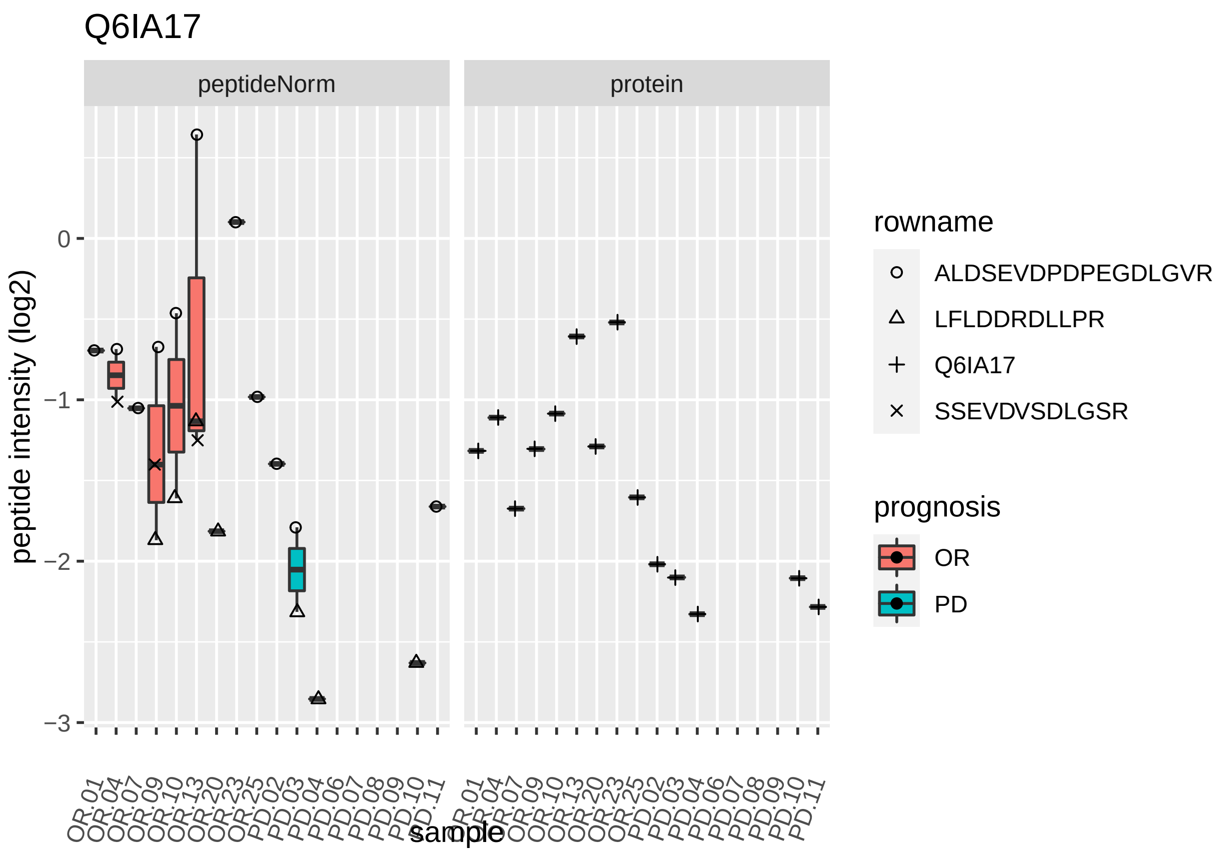


Q8TE68
peptideNorm
protein
peptide intensity (log2)
−1.5
−2.0
−2.5
−3.0
−3.5
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
sample
rowname
○ EVDILNHVFDDVESFVSR
△ Q8TE68
+ STATGPEAAPKPSAK
× VYSQVTVQR
prognosis
🟥 OR
🟦 PD

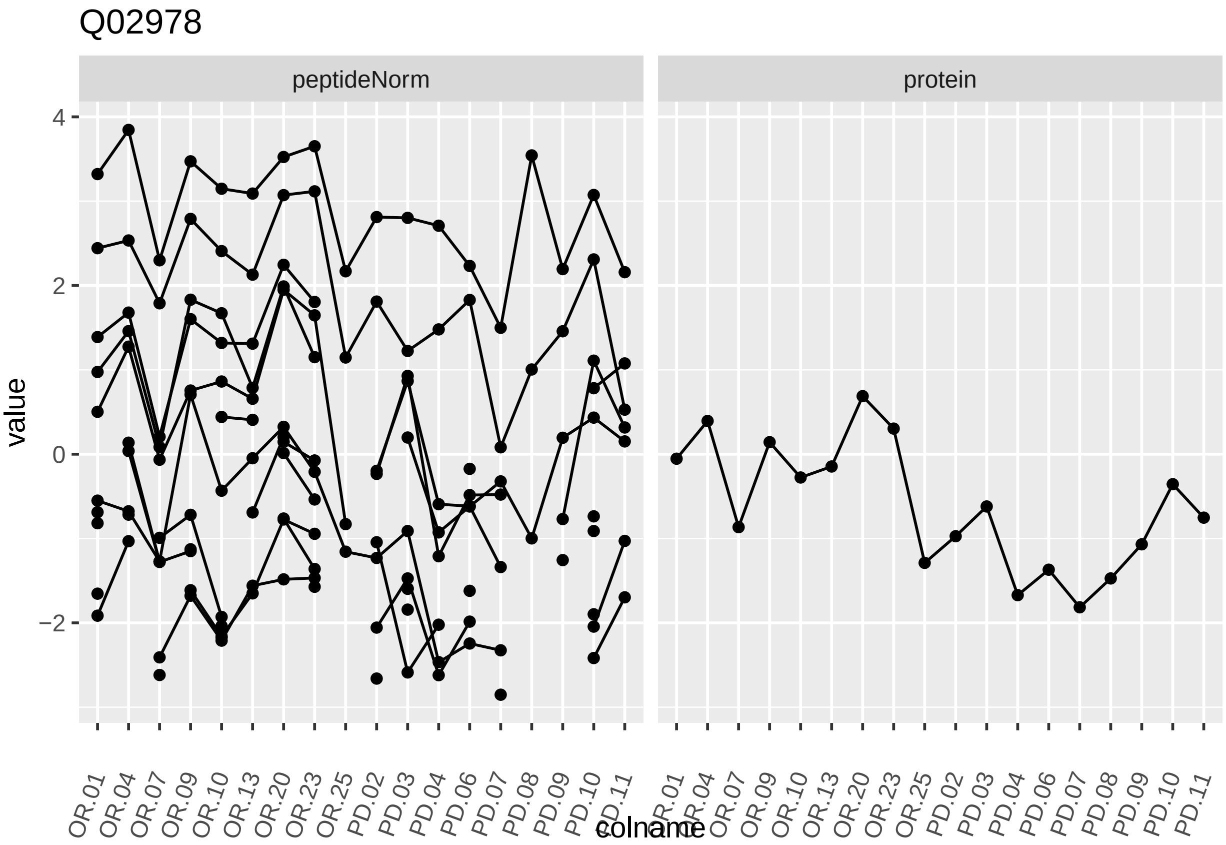

Q15181
peptideNorm
protein
value
2.5
0.0
−2.5
−5.0
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

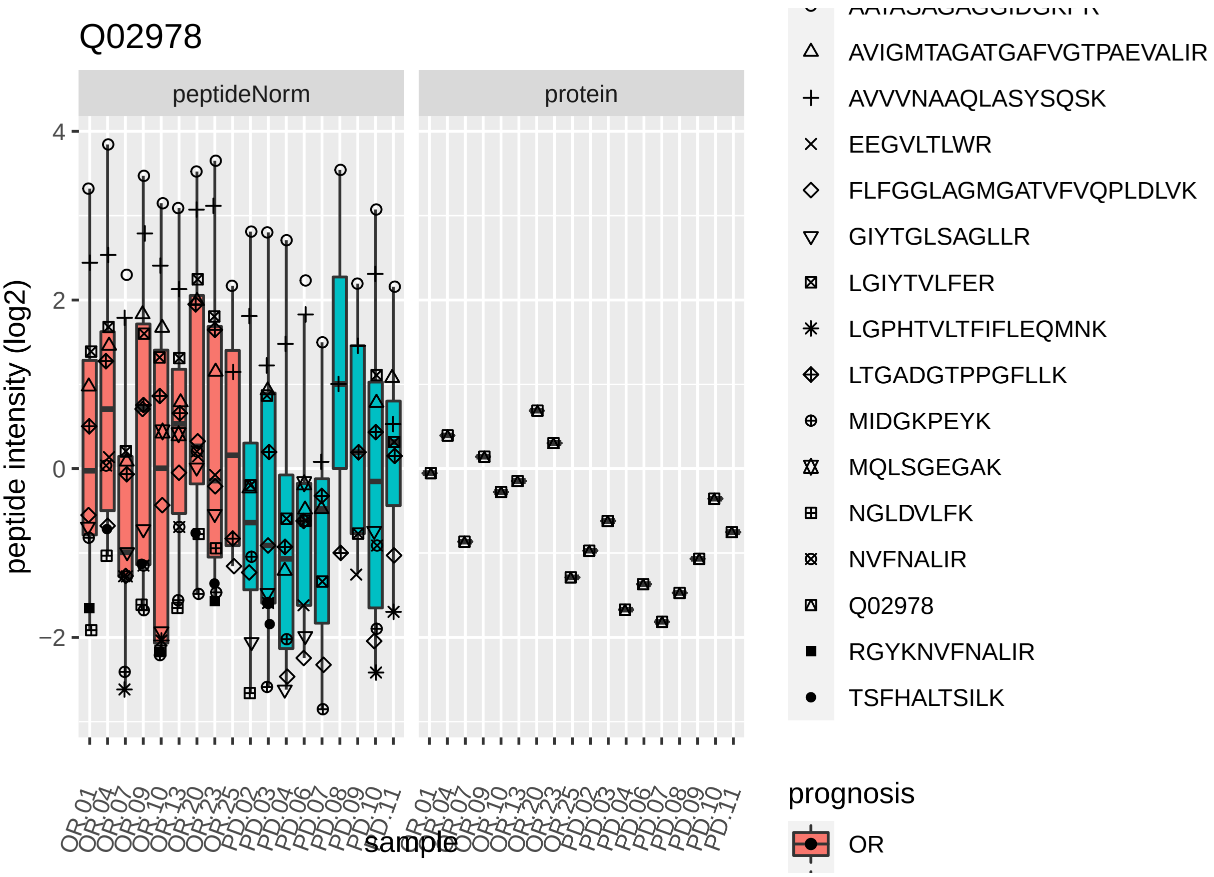

Q15181
peptideNorm
protein
peptide intensity (log2)
2.5
0.0
−2.5
−5.0
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
sample
rowname
○ AAPFSLEYR
△ DKDFAIDIIK
+ Q15181
× VFLKNEK
◇ VIAINVDDPDAANYNDINDVK
▽ VIAINVDDPDAANYNDINDVKR
⊠ VLGILAMIDEGETDWK
✳ YVANLFPYK
prognosis
🟥 OR
🟦 PD

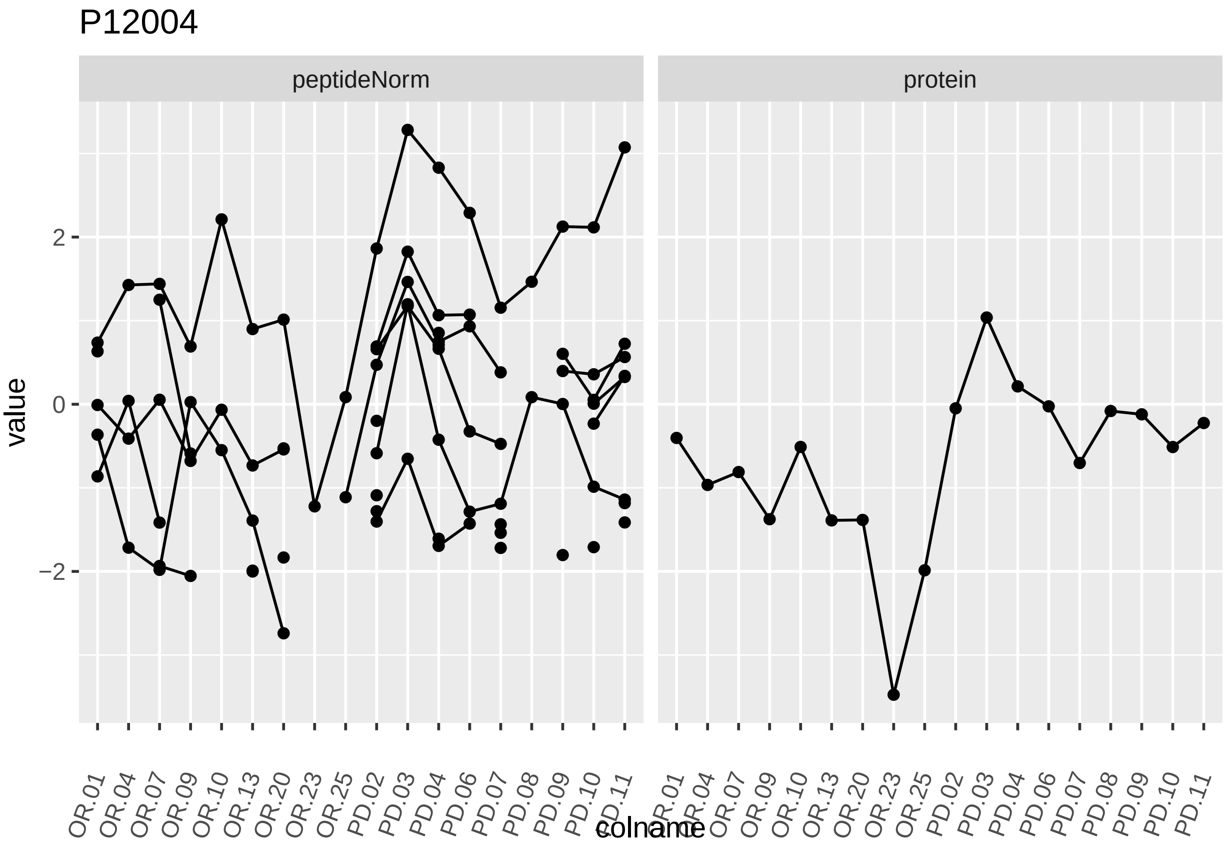

Q6IA17
peptideNorm
protein
value
0
−1
−2
−3
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

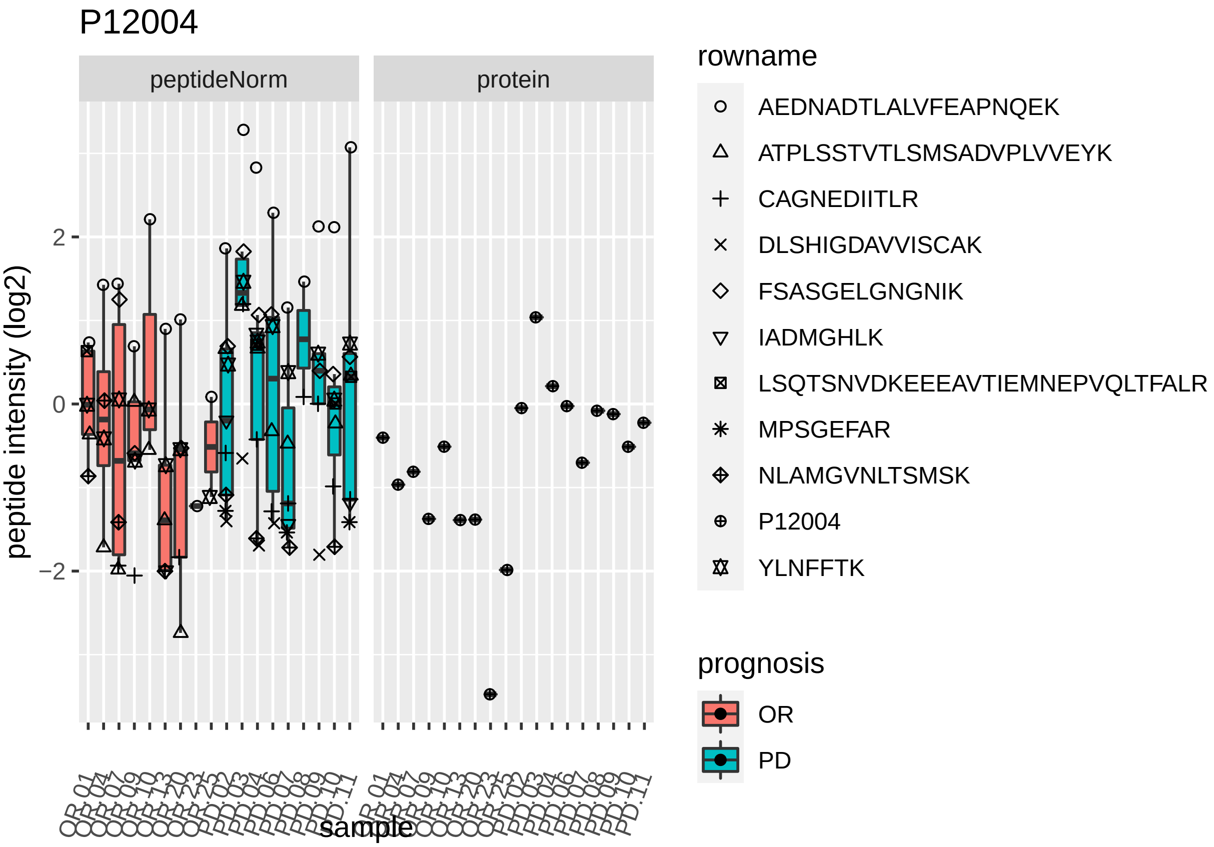


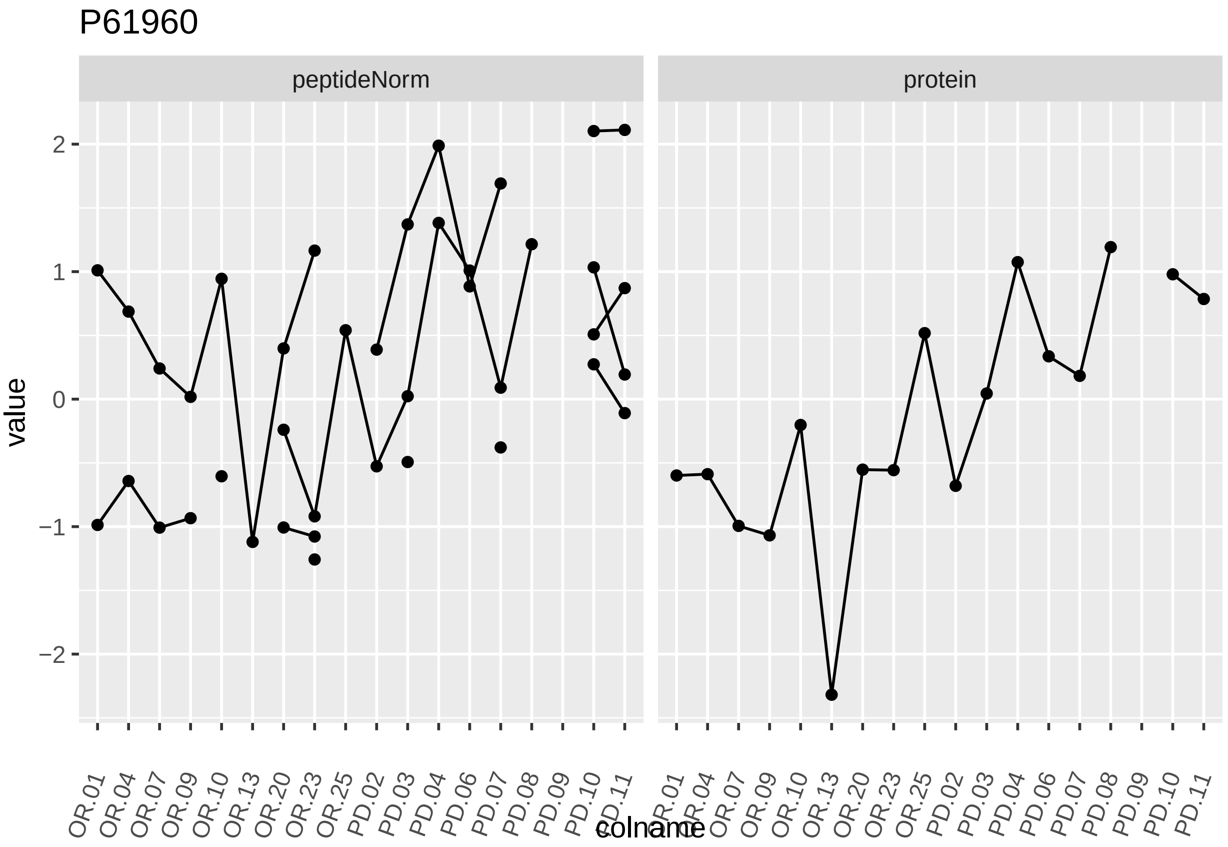
Q6IA17
peptideNorm
protein
peptide intensity (log2)
0
−1
−2
−3
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
sample
rowname
○ ALDSEVDPDPEGDLGVR
△ LFLDDRDLLPR
+ Q6IA17
× SSEVDVSDLGSR
prognosis
OR
PD

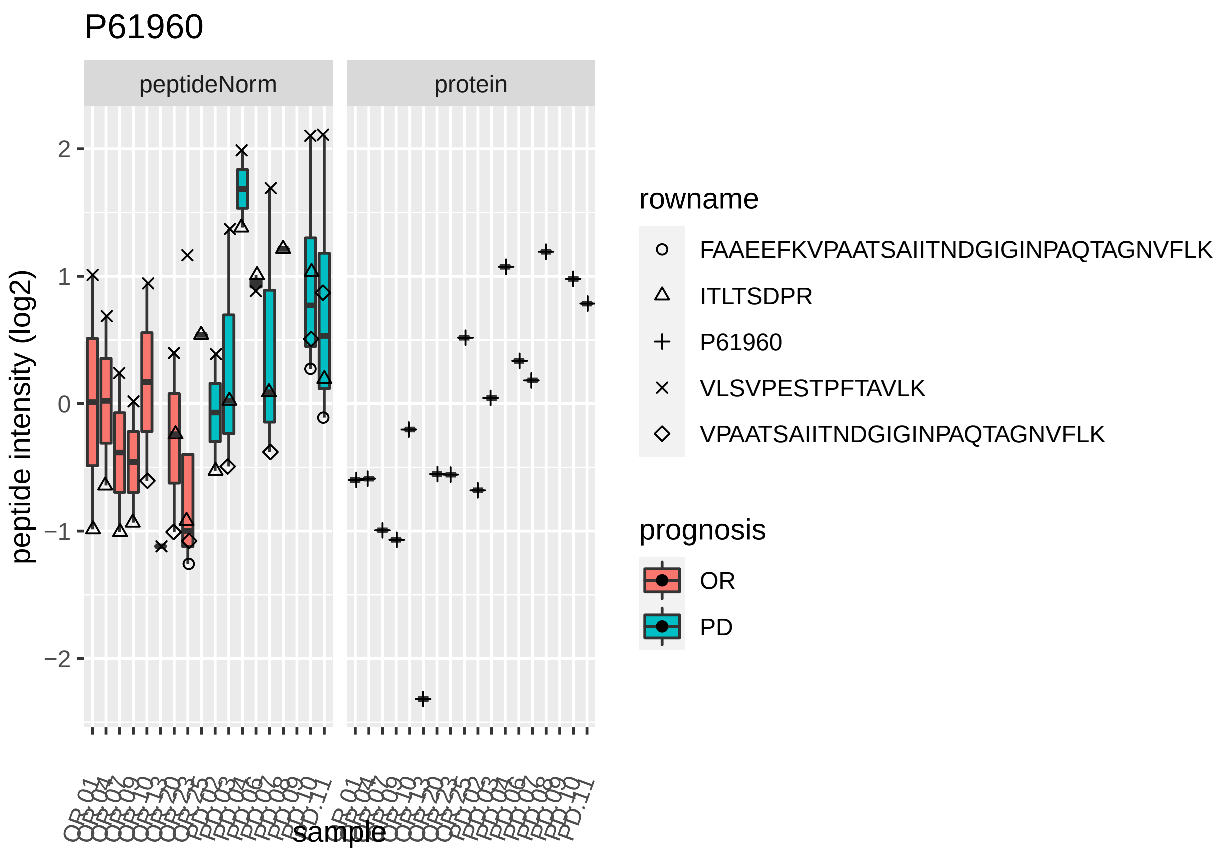

Q02978
peptideNorm
protein
value
4
2
0
−2
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

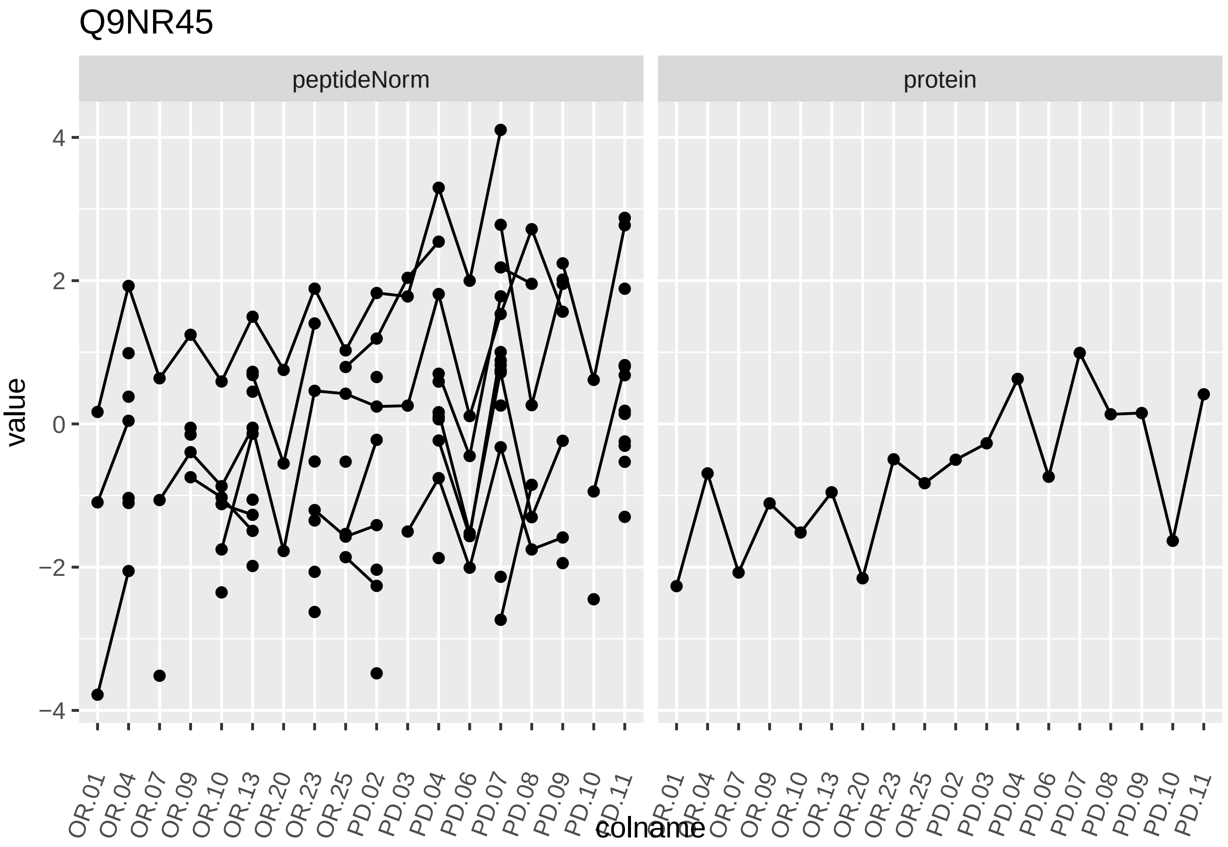

Q02978
peptideNorm
protein
peptide intensity (log2)
4
2
0
−2
sample
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
AVIGMTAGATGAFVGTPAEVALIR
AVVVNAAQLASYSQSK
EEGVLTLWR
FLFGGLAGMGATVFVQPLDLVK
GIYTGLSAGLLR
LGIYTVLFER
LGPHTVLTFIFLEQMNK
LTGADGTPPGFLLK
MIDGKPEYK
MQLSGEGAK
NGLDVLFK
NVFNALIR
Q02978
RGYKNVFNALIR
TSFHALTSILK
prognosis
OR

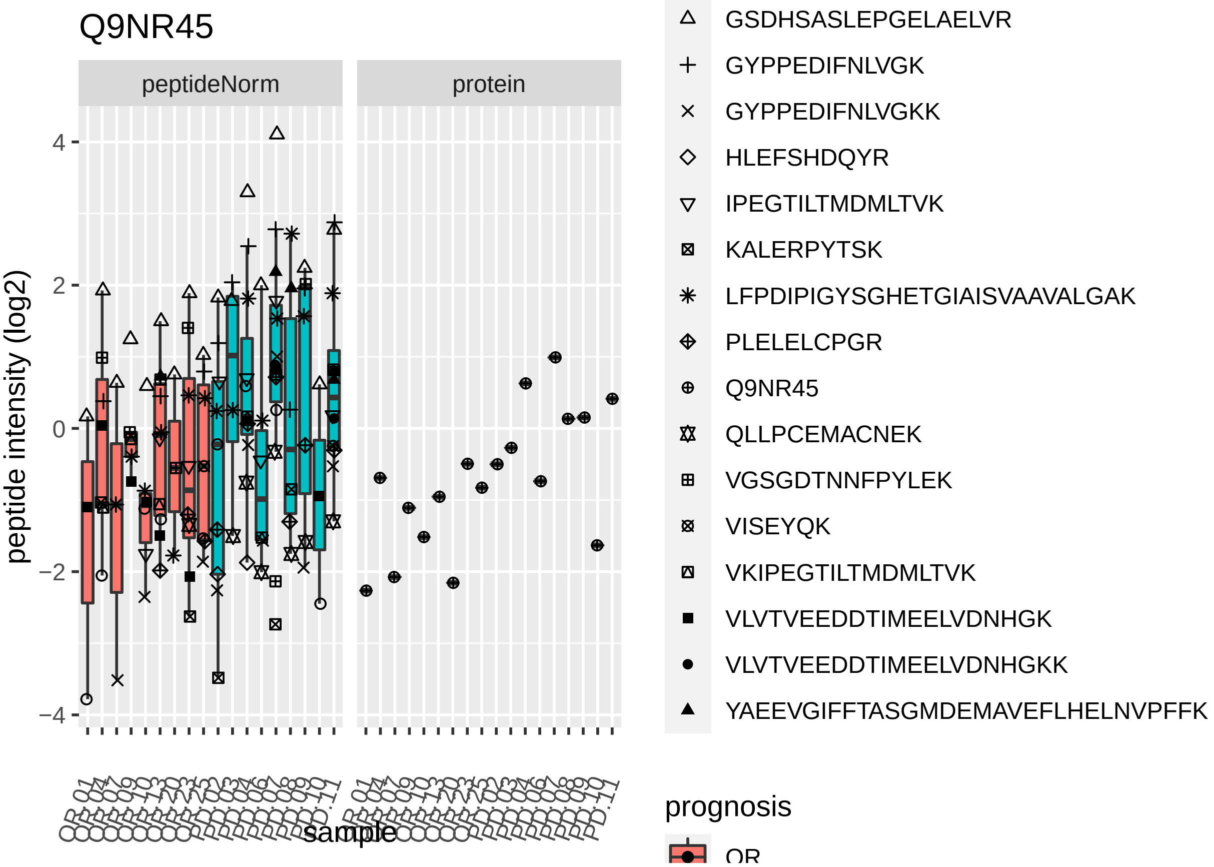

P12004
peptideNorm
protein
value
2
0
−2
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

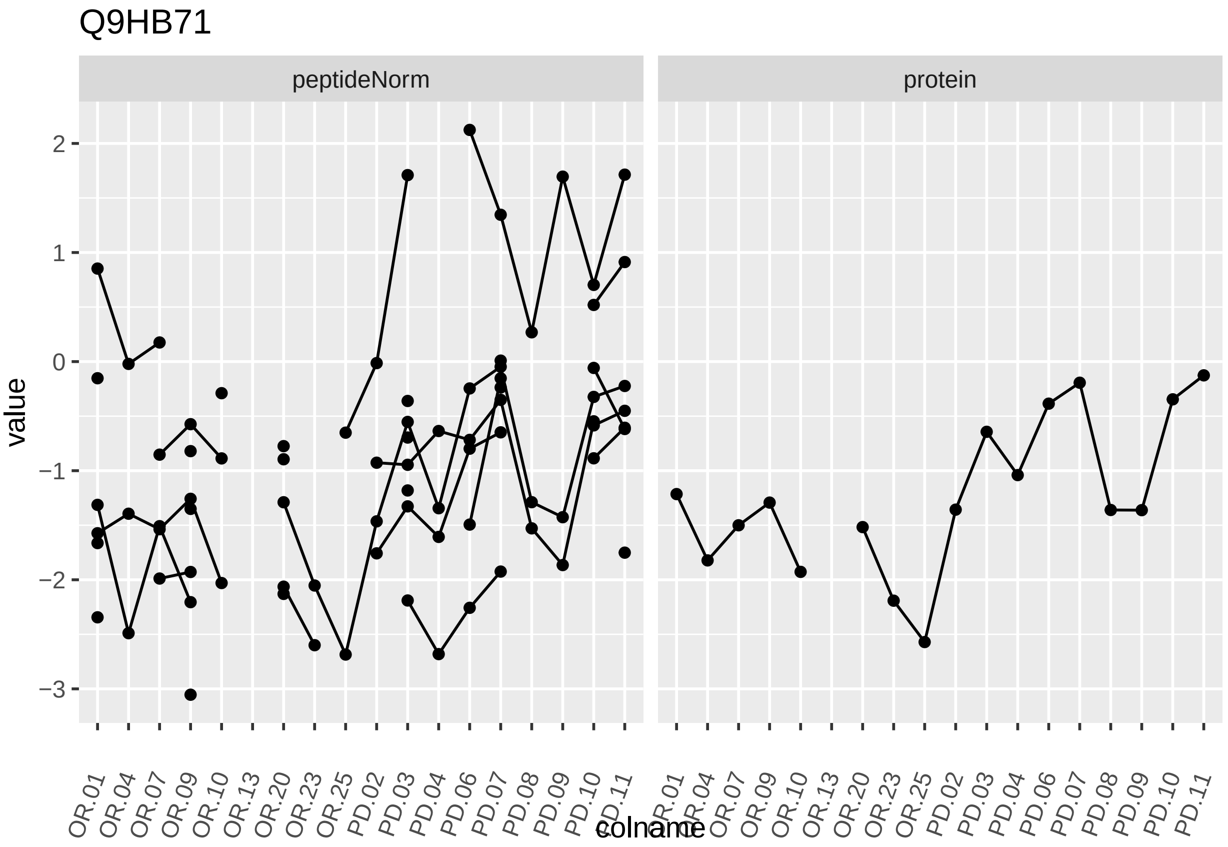

P12004
peptideNorm
protein
peptide intensity (log2)
2
0
−2
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
sample
rowname
○ AEDNADTLALVFEAPNQEK
△ ATPLSSTVTLSMSADVPLVVEYK
+ CAGNEDIITLR
× DLSHIGDAVVISCAK
◇ FSASGELGNGNIK
▽ IADMGHLK
⊠ LSQTSNVDKEEEAVTIEMNEPVQLTFALR
✳ MPSGEFAR
◈ NLAMGVNLTSMSK
⊕ P12004
✡ YLNFFTK
prognosis
🟥 OR
🟦 PD


P61960
peptideNorm
protein
value
2
1
0
−1
−2
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

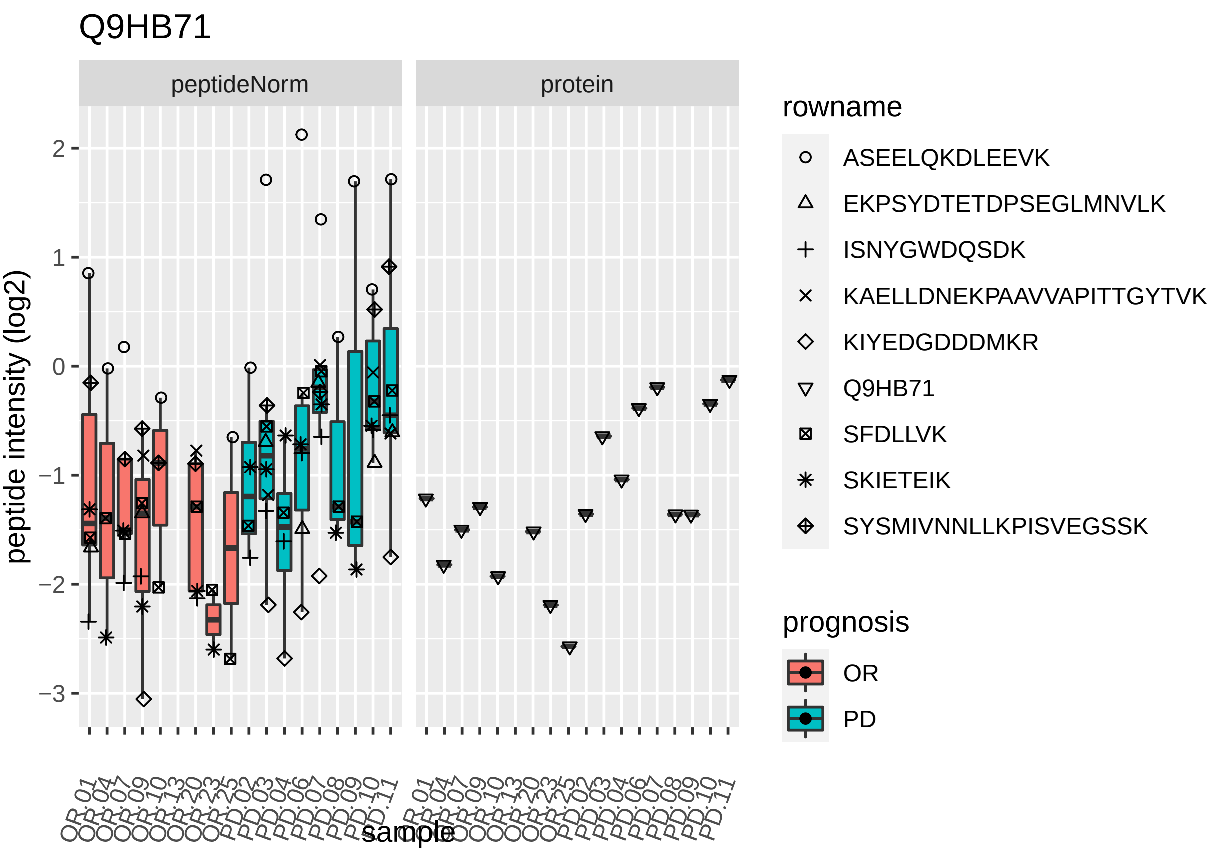

P61960
peptideNorm
protein
peptide intensity (log2)
2
1
0
−1
−2
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.21
OR.23
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.21
OR.23
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
sample
rowname
○ FAAEEFKVPAATSAIITNDGIGINPAQTAGNVFLK
△ ITLTSDPR
+ P61960
× VLSVPESTPFTAVLK
◇ VPAATSAIITNDGIGINPAQTAGNVFLK
prognosis
OR
PD

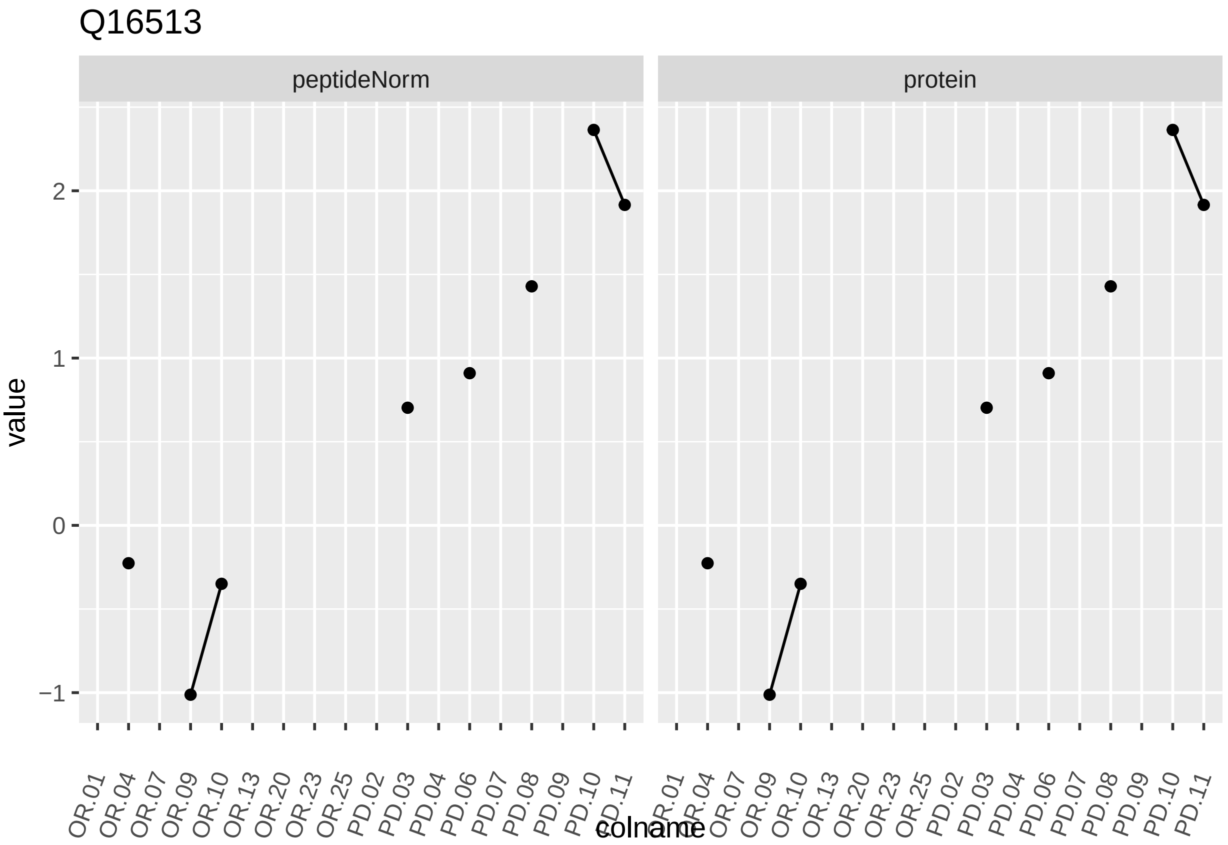

Q9NR45
peptideNorm
protein
value
4
2
0
−2
−4
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

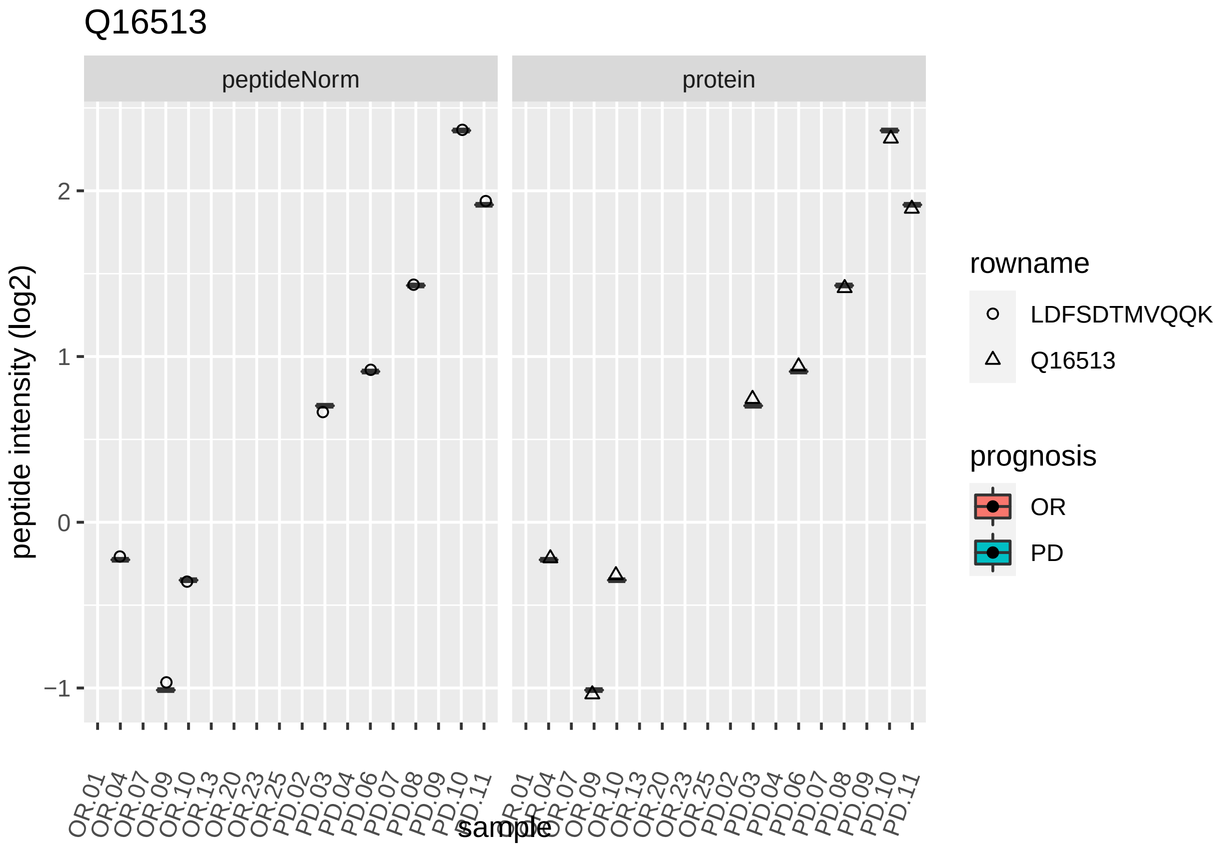

Q9NR45
peptideNorm
protein
peptide intensity (log2)
4
2
0
−2
−4
OR_01
OR_04
OR_07
OR_09
OR_10
OR_13
OR_20
OR_21
OR_22
PD_02
PD_03
PD_04
PD_06
PD_07
PD_08
PD_09
PD_10
PD_11
sample
△ GSDHSASLEPGELAELVR
+ GYPPEDIFNLVGK
× GYPPEDIFNLVGKK
◇ HLEFSHDQYR
▽ IPEGTILTMDMLTVK
⊠ KALERPYTSK
✳ LFPDIPIGYSGHETGIAISVAAVALGAK
⟐ PLELELCPGR
⊕ Q9NR45
✡ QLLPCEMACNEK
⊞ VGSGDTNNFPYLEK
⊠ VISEYQK
◪ VKIPEGTILTMDMLTVK
■ VLVTVEEDDTIMEELVDNHGK
● VLVTVEEDDTIMEELVDNHGKK
▲ YAEEVGIFFTASGMDEMAVEFLHELNVPFFK
prognosis
OR

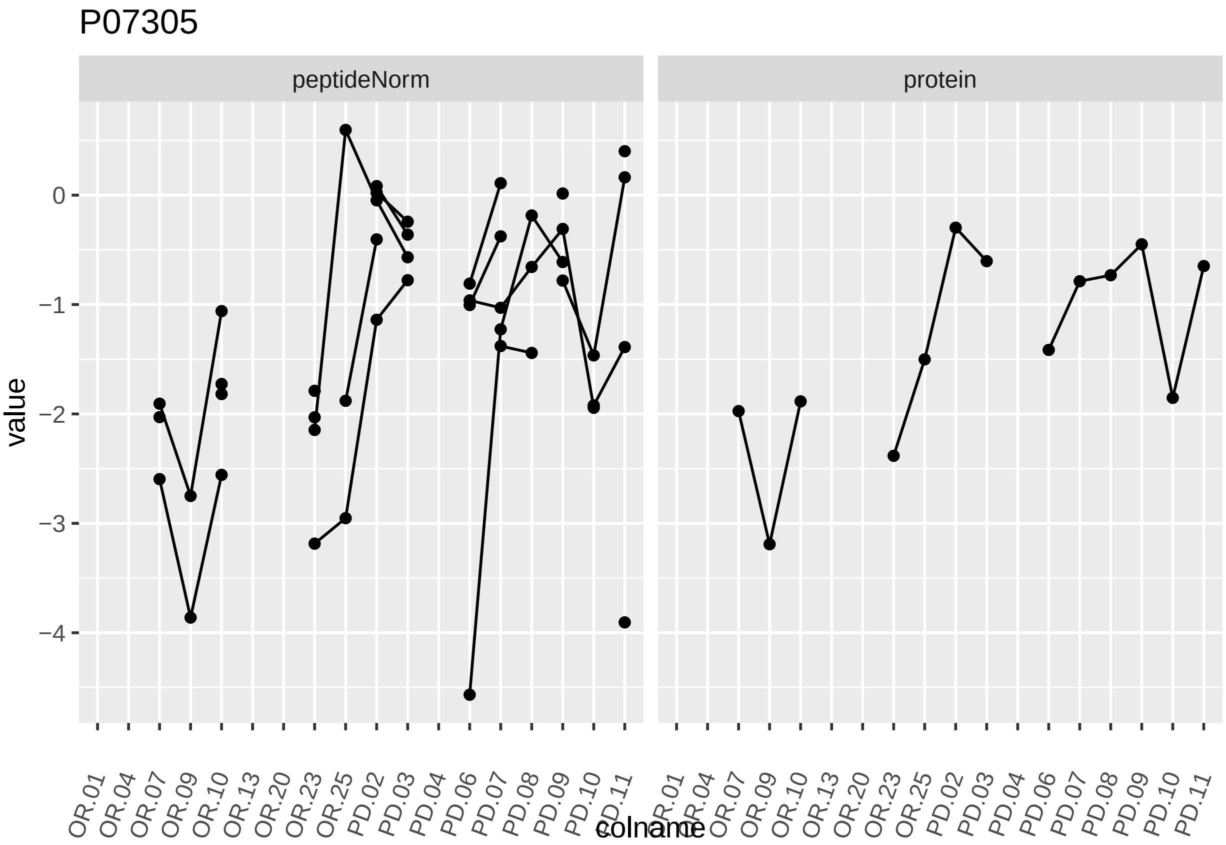


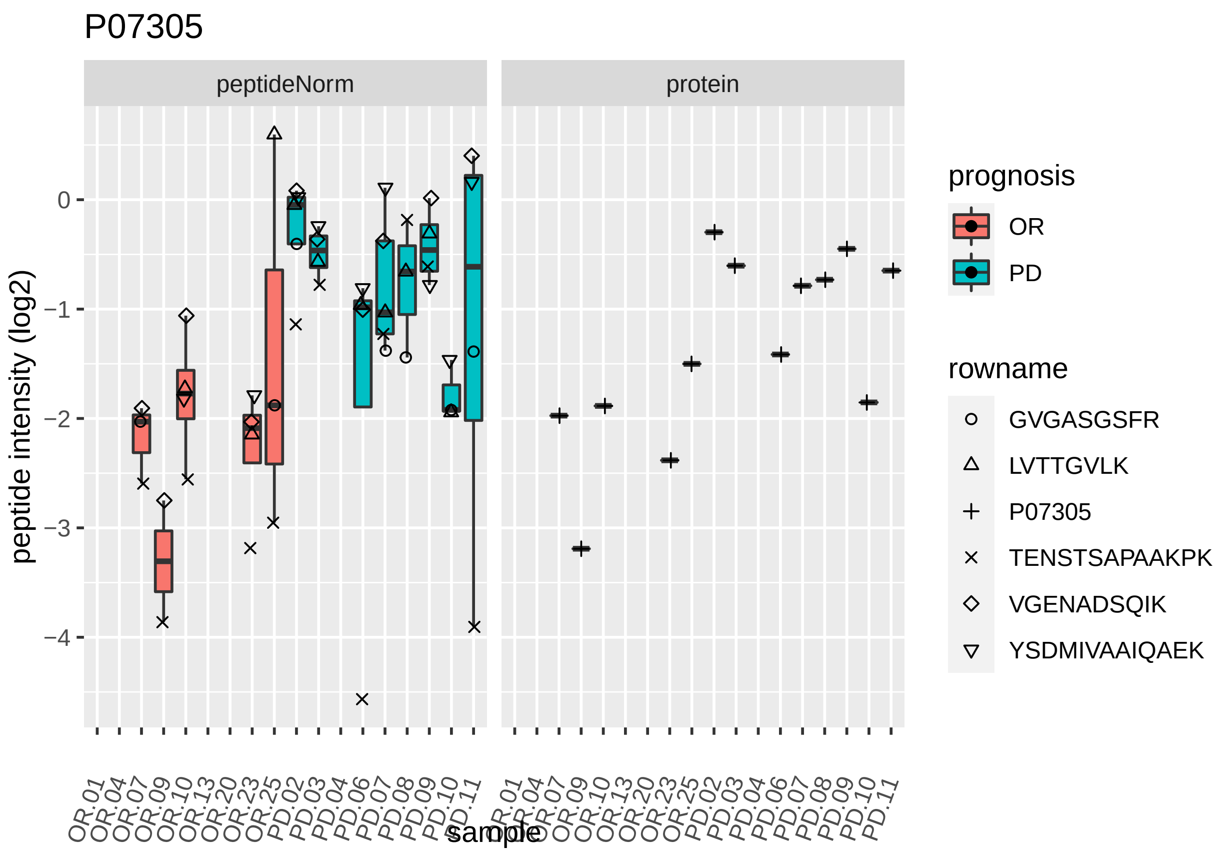
Q9HB71
peptideNorm
protein
value
2
1
0
−1
−2
−3
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

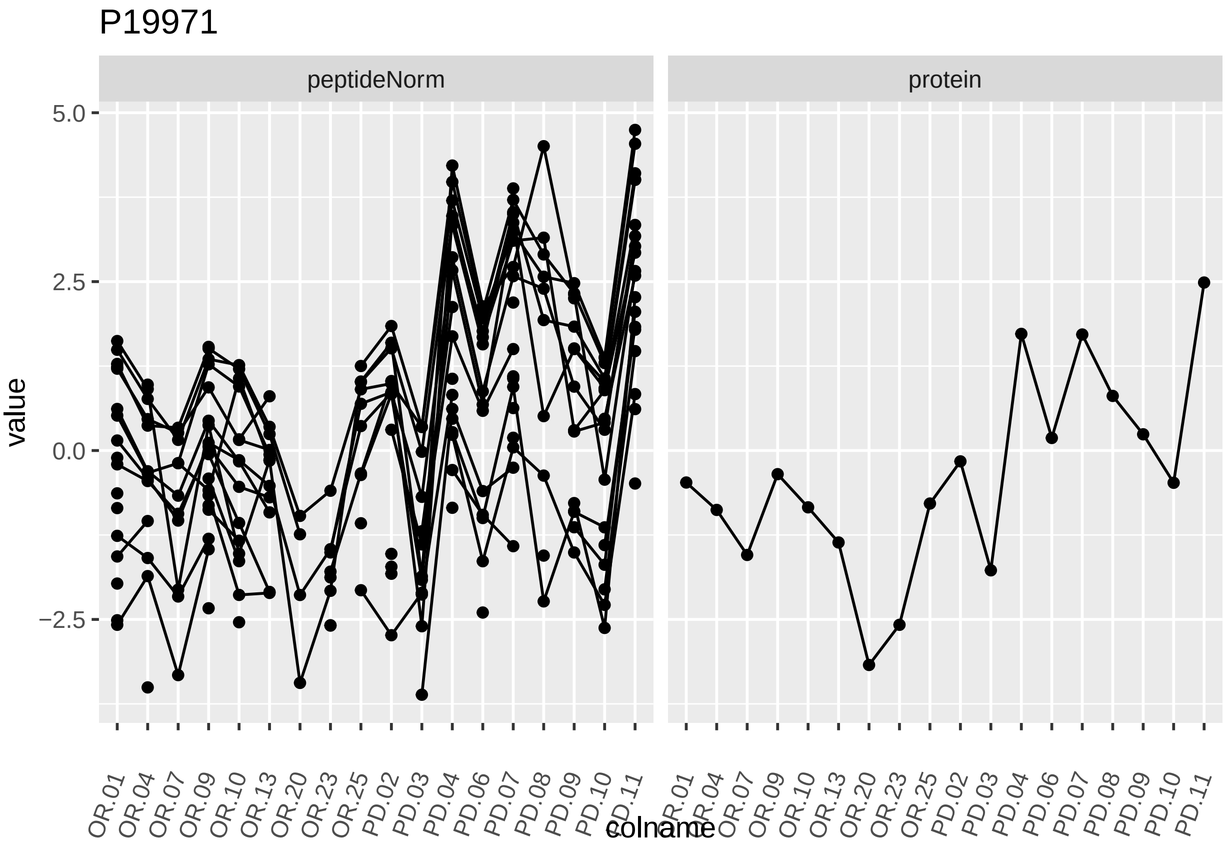

Q9HB71
peptideNorm
protein
peptide intensity (log2)
2
1
0
−1
−2
−3
sample
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
rowname
○ ASEELQKDLEEVK
△ EKPSYDTETDPSEGLMNVLK
+ ISNYGWDQSDK
× KAELLDNEKPAAVVAPITTGYTVK
◇ KIYEDGDDDMKR
▽ Q9HB71
⊠ SFDLLVK
✳ SKIETEIK
⊕ SYSMIVNNLLKPISVEGSSK
prognosis
OR
PD


Q16513
peptideNorm
protein
value
2
1
0
−1
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

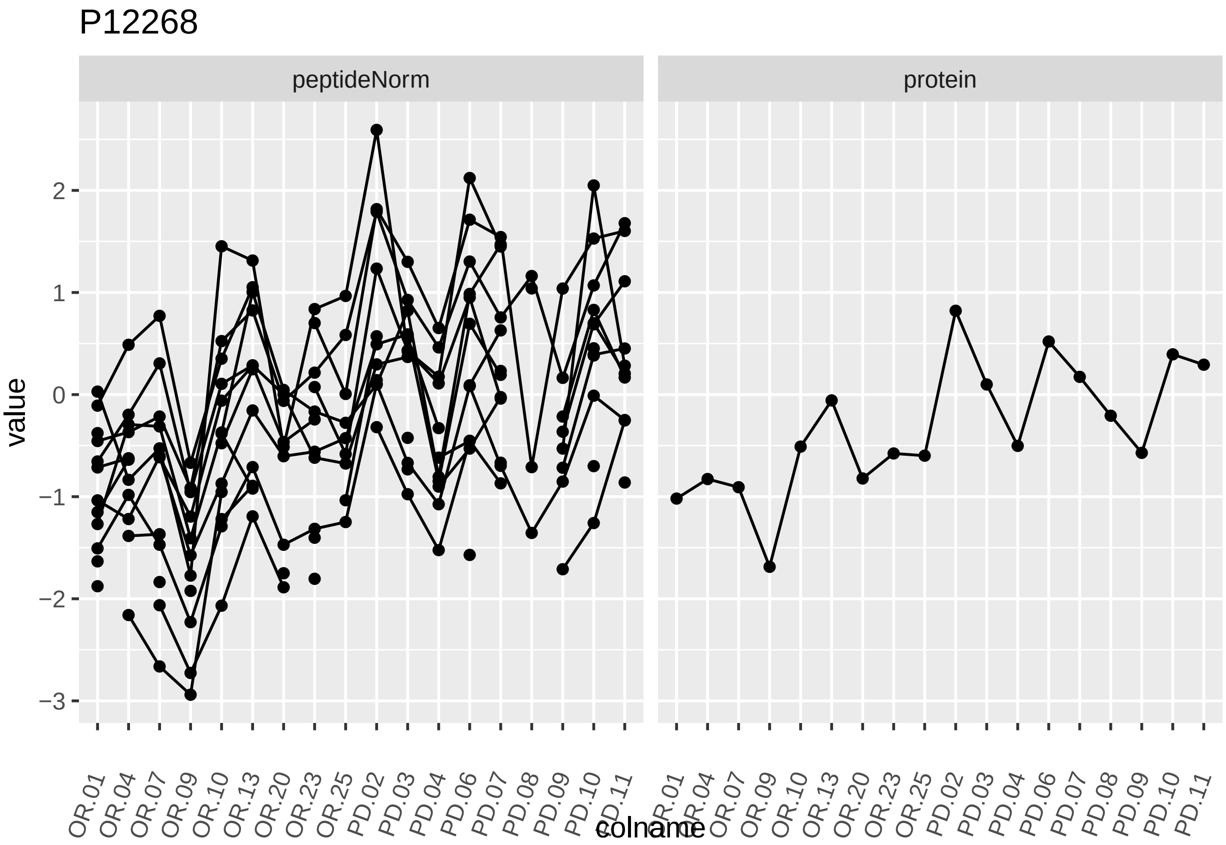

Q16513
peptideNorm
protein
peptide intensity (log2)
2
1
0
−1
sample
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
rowname
LDFSDTMVQQK
Q16513
prognosis
OR
PD

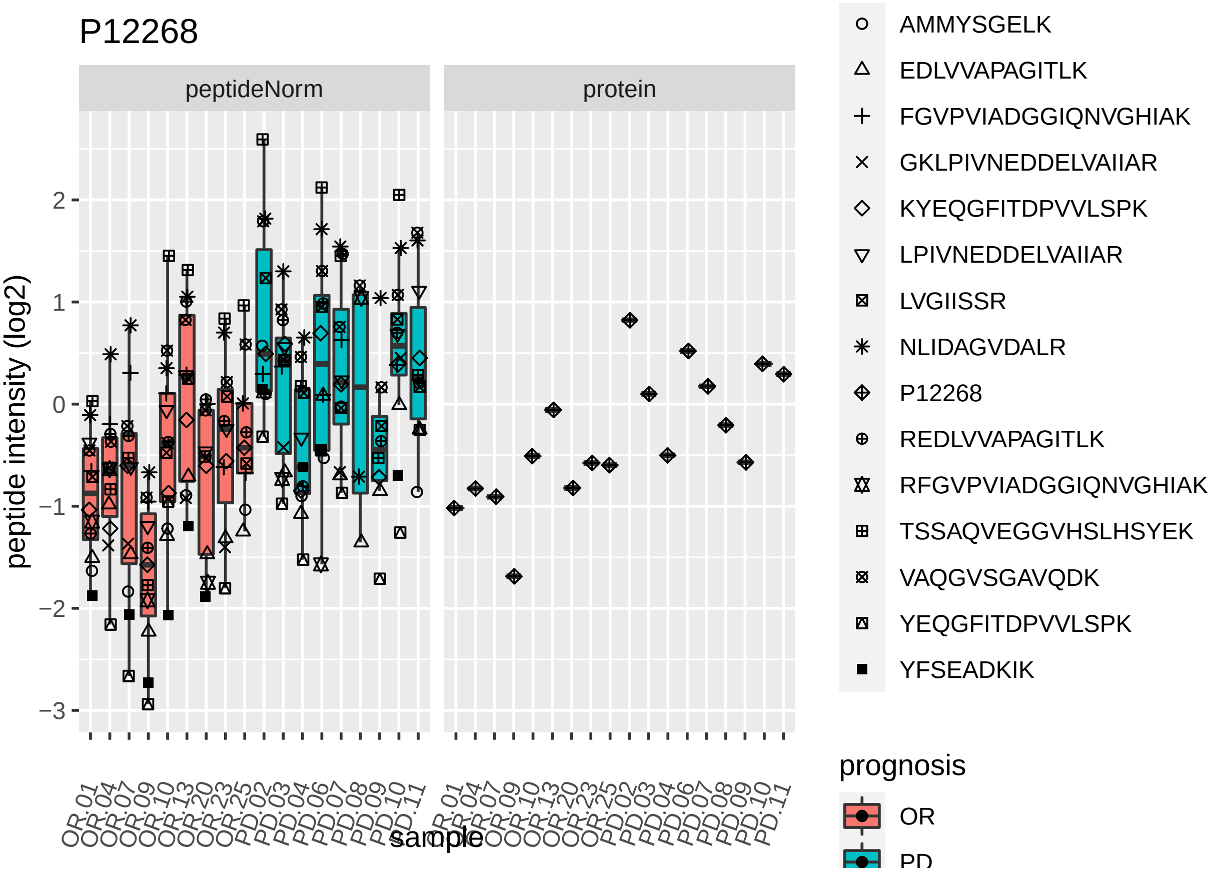

P07305
peptideNorm
protein
value
0
−1
−2
−3
−4
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

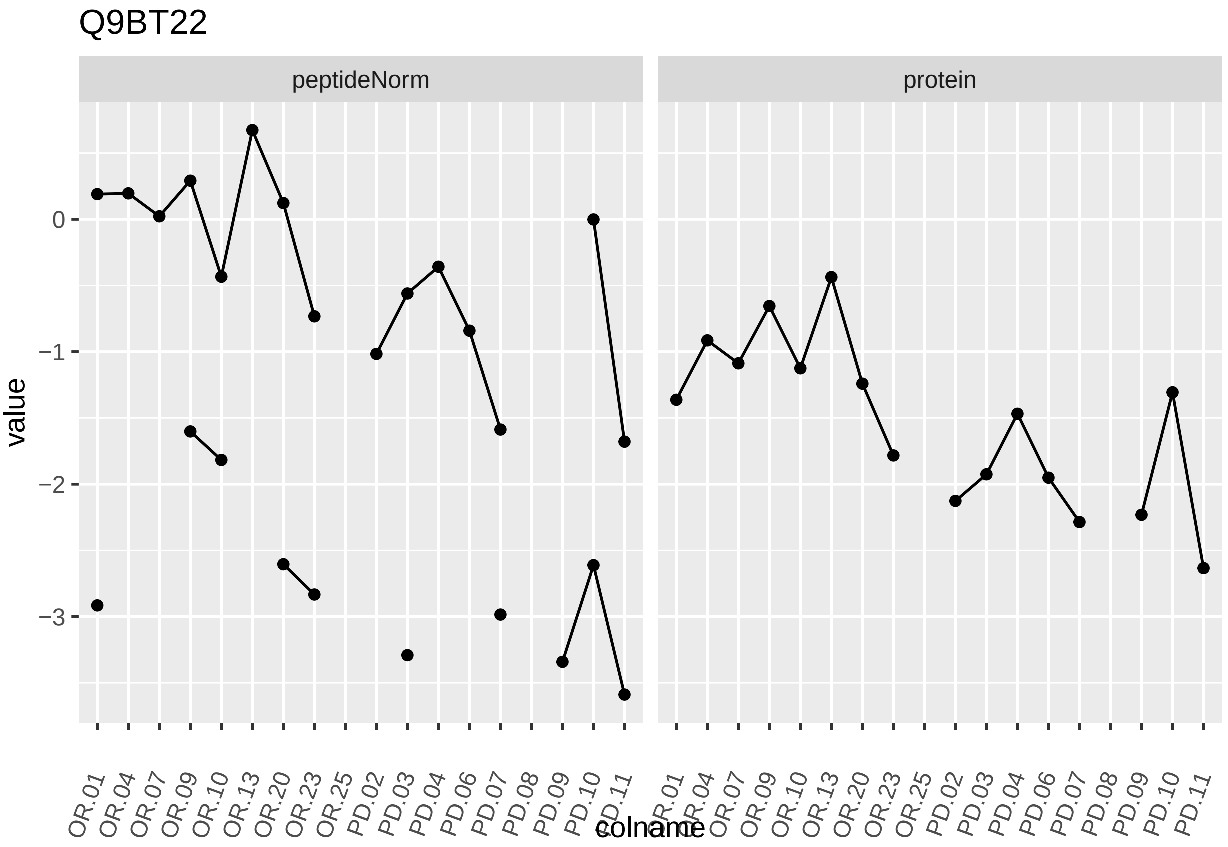

P07305
peptideNorm
protein
peptide intensity (log2)
0
−1
−2
−3
−4
sample
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
prognosis
OR
PD
rowname
GVGASGSFR
LVTTGVLK
P07305
TENSTSAPAAKPK
VGENADSQIK
YSDMIVAAIQAEK

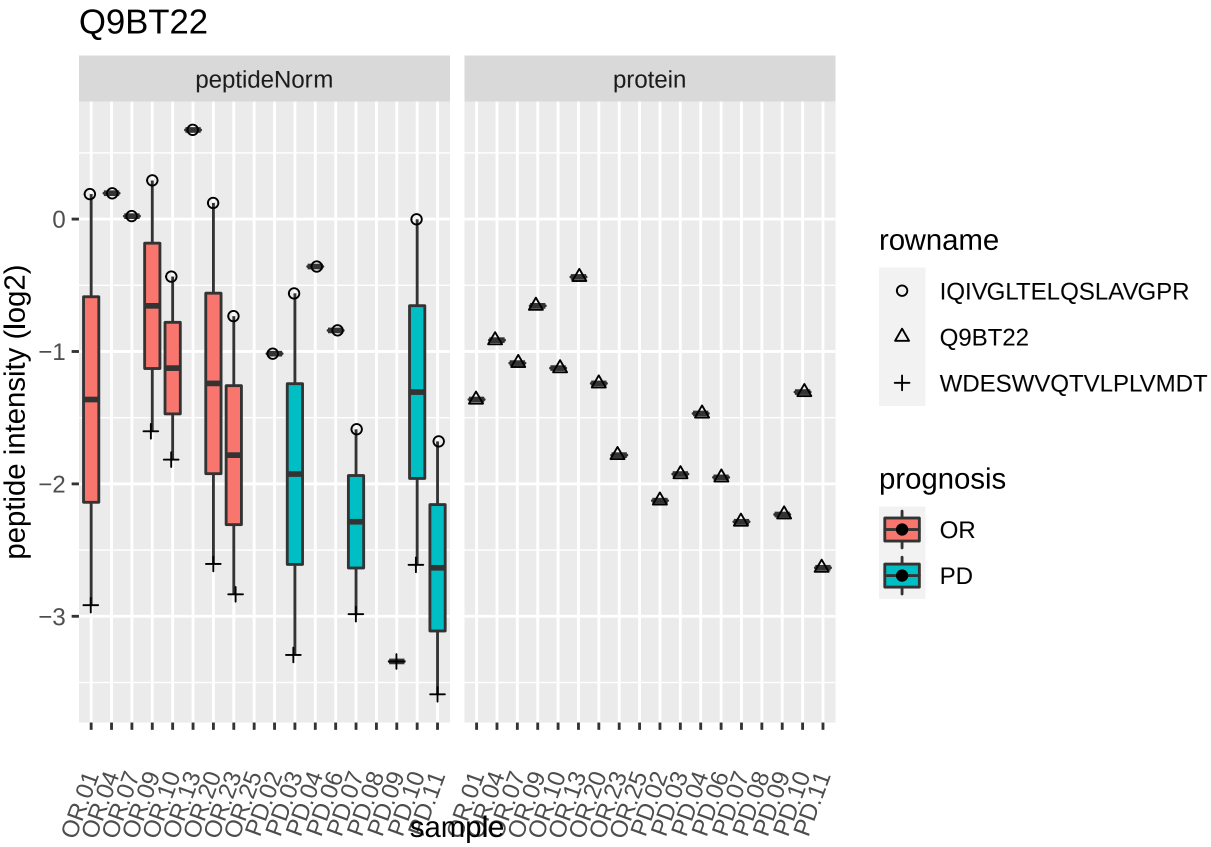

P19971
peptideNorm
protein
value
5.0
2.5
0.0
−2.5
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

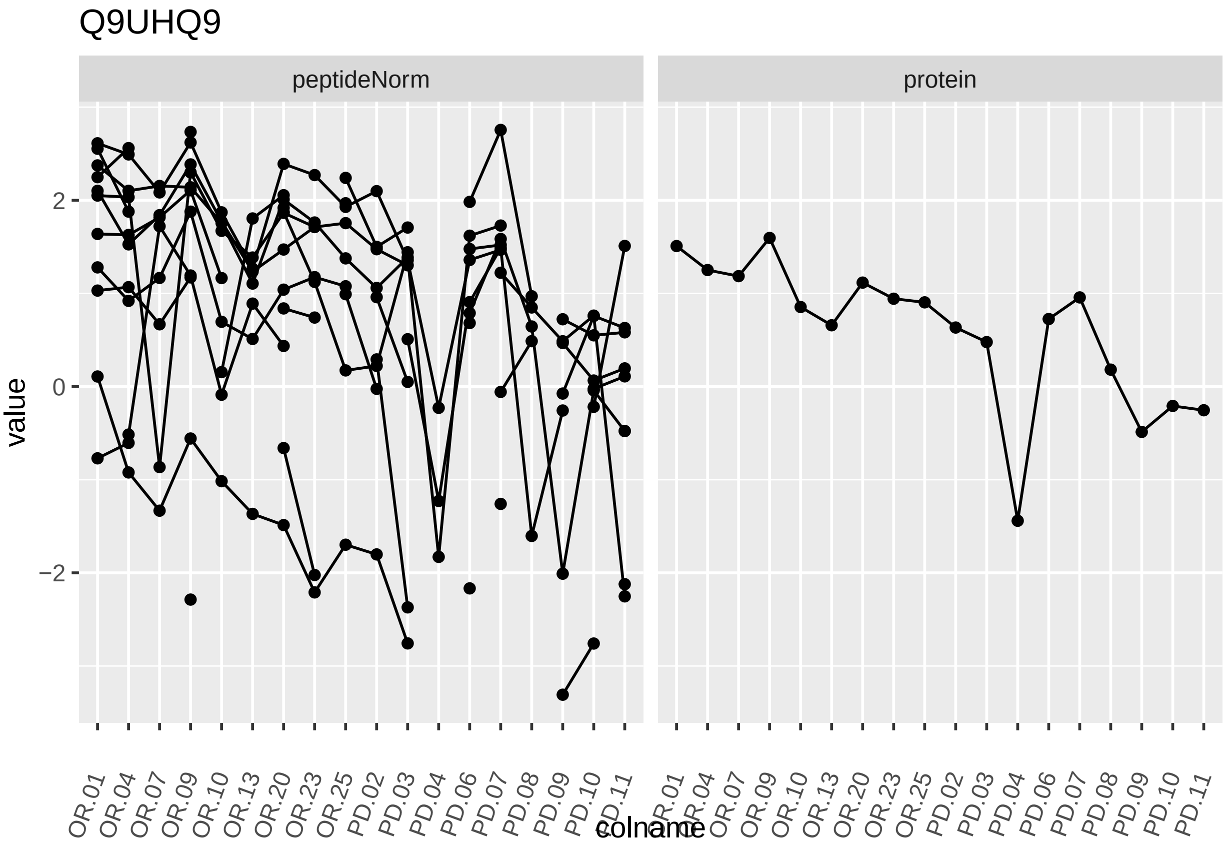
P19971
prognosis
OR
PD
rowname
ALCSGSPAER
ALPLALVLHELGAGR
ALQEALVLSDR
APFAAPSPFAELVLPPQQ
AREQEELLAPADGTVELVR
DGPALSGPQSR
DLVTTLGGALLWLSGHAGTQAQGAAR
DVTATVDSLPLITASILSK
EQEELLAPADGTVELVR
FGGAAVFPNQEQAR
GLGHTGGTLDK
GMDLEETSVLTQALAQSGQQLEWPEAWR
KLVEGLSALVVDVK
LGVGAELLVDVGQR
LSEADIR
LSEADIRGFVAAVVNGSAQGAQIGAMLMAIR
LVEGLSALVVDVK
MLAAQGVDPGLAR
P19971
TLVGVGASLGLR
VAAALDDGSALGR
VSLVLAPALAACGCK
peptide intensity (log2)
5.0
2.5
0.0
−2.5
sample

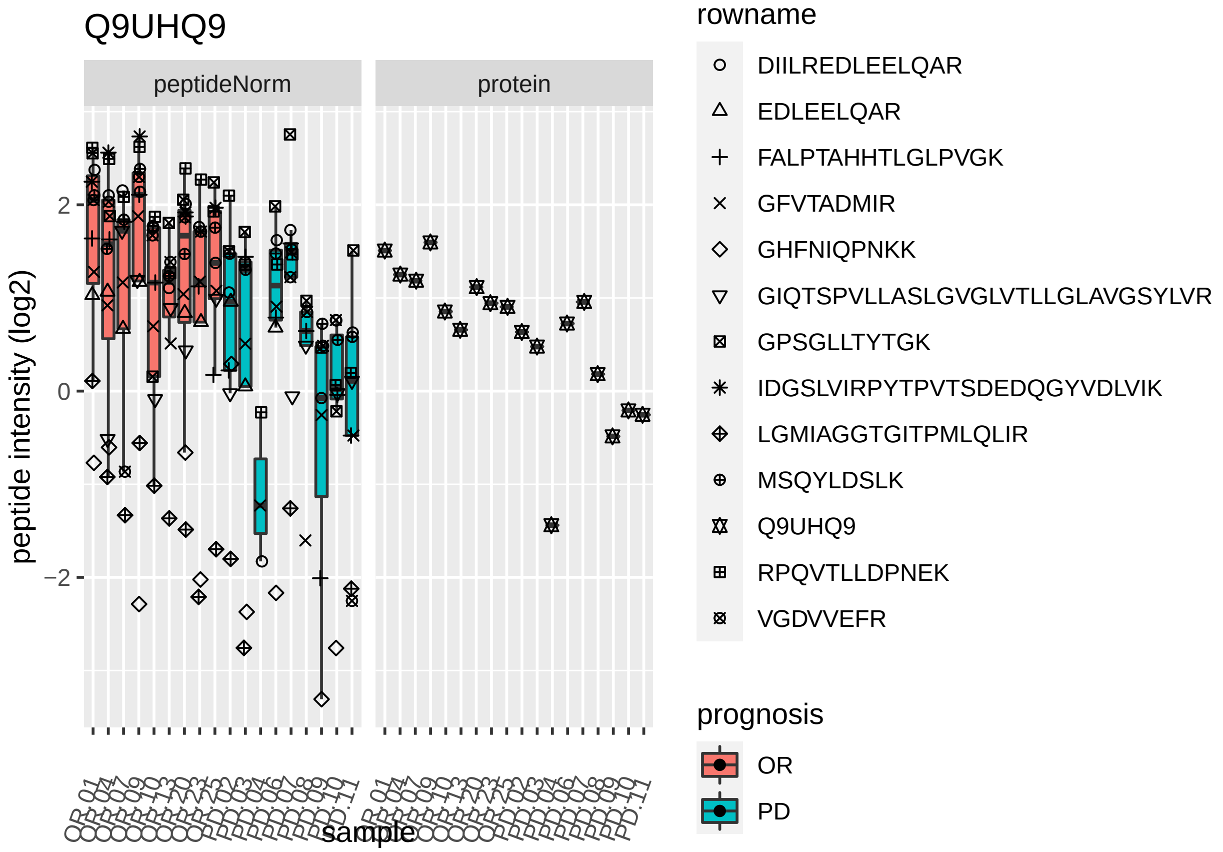

P12268
peptideNorm
protein
value
2
1
0
−1
−2
−3
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

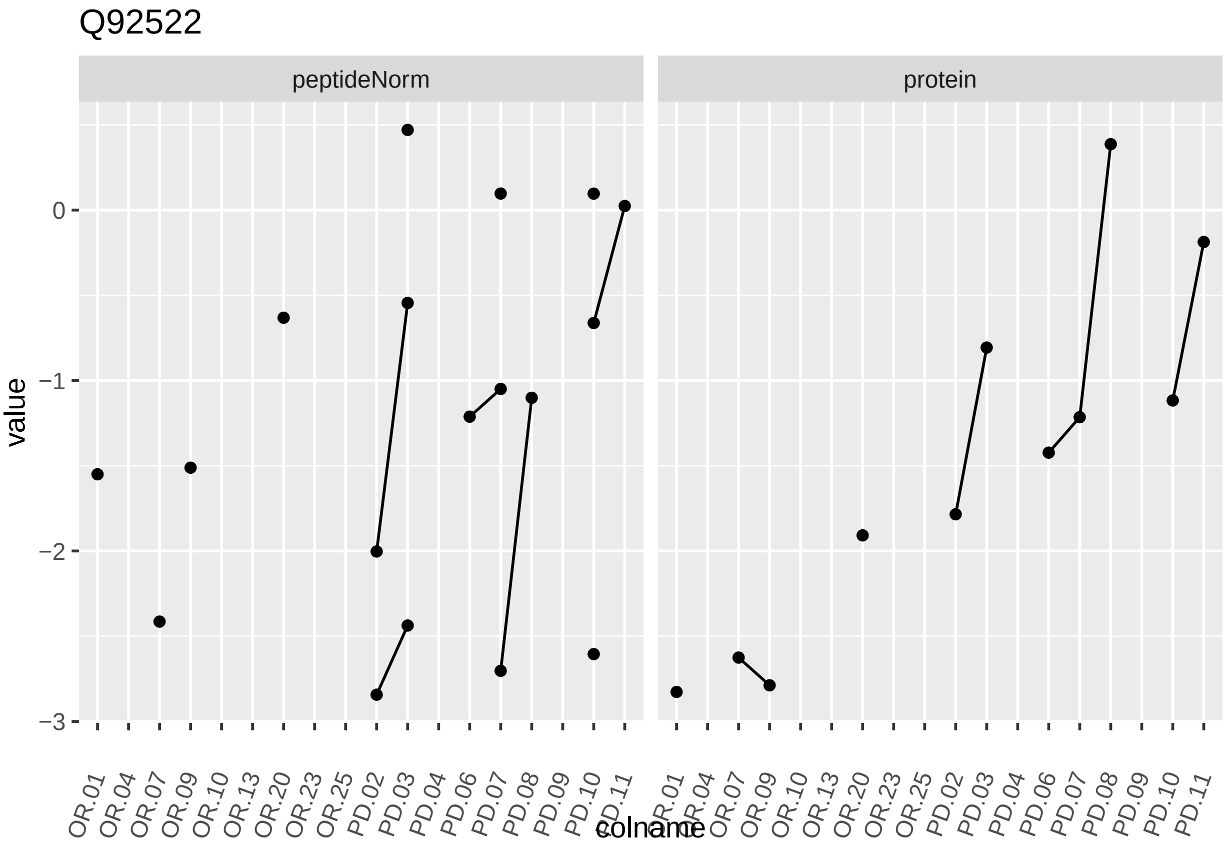

P12268
peptideNorm
protein
peptide intensity (log2)
2
1
0
−1
−2
−3
sample
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
○ AMMYSGELK
△ EDLVVAPAGITLK
+ FGVPVIADGGIQNVGHIAK
× GKLPIVNEDDELVAIIAR
◇ KYEQGFITDPVVLSPK
▽ LPIVNEDDELVAIIAR
⊠ LVGIISSR
✳ NLIDAGVDALR
◇ P12268
⊕ REDLVVAPAGITLK
✡ RFGVPVIADGGIQNVGHIAK
⊞ TSSAQVEGGVHSLHSYEK
⊗ VAQGVSGAVQDK
◪ YEQGFITDPVVLSPK
■ YFSEADKIK
prognosis
🟥 OR
🟦 PD

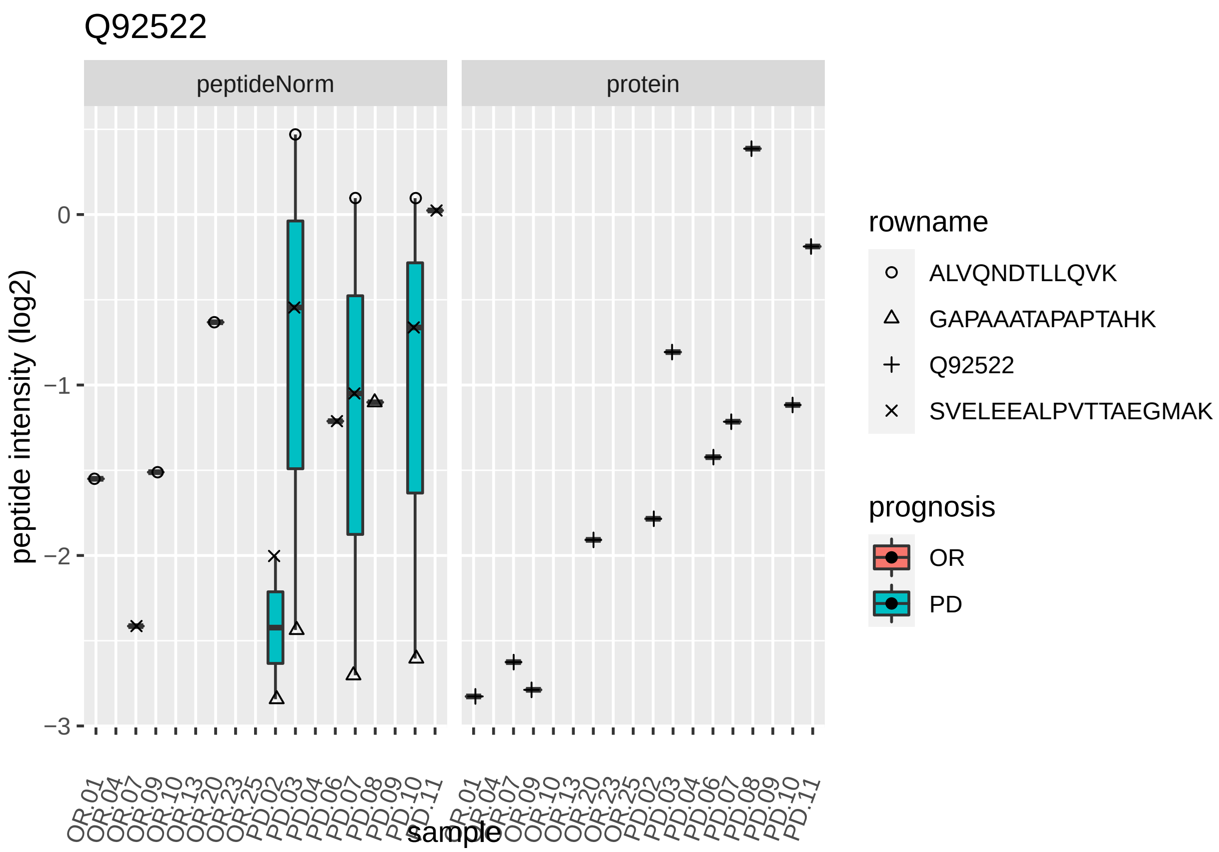

Q9BT22
peptideNorm
protein
value
0
−1
−2
−3
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

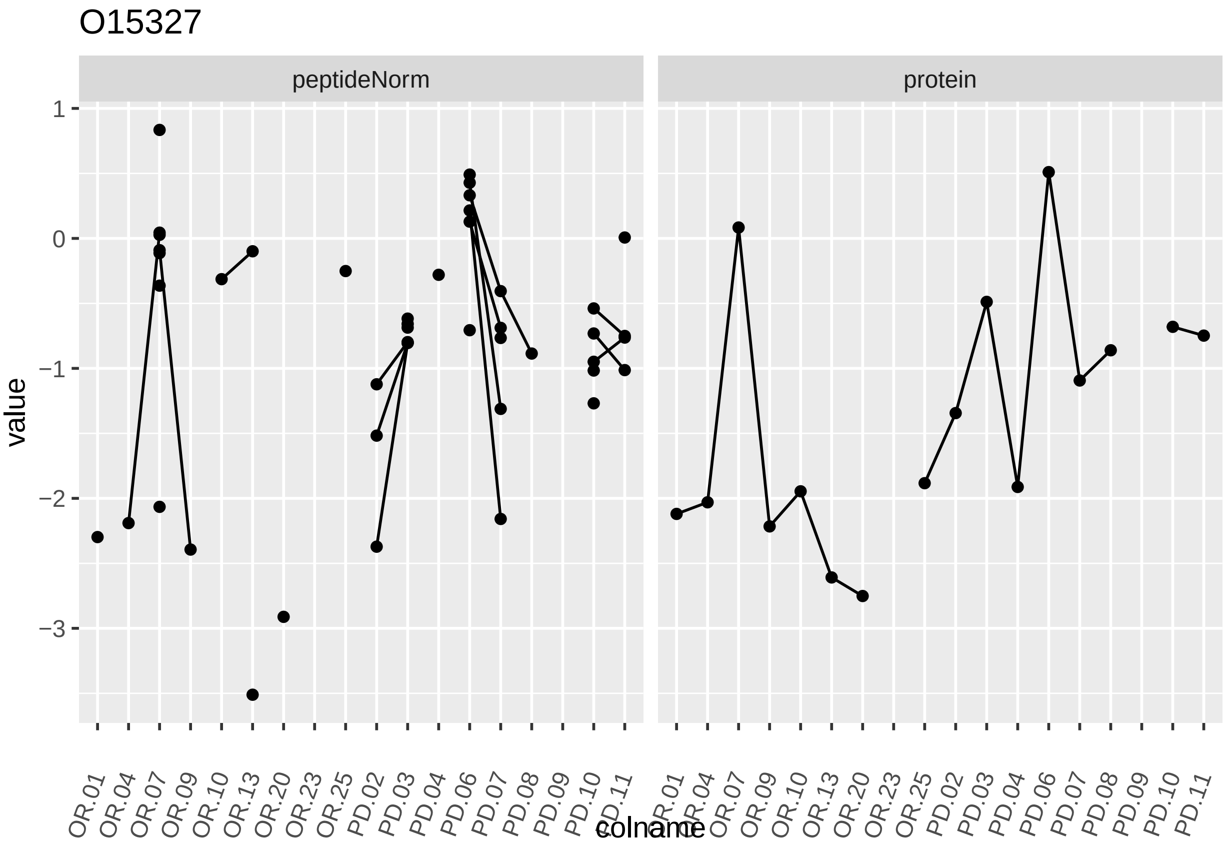

Q9BT22
peptideNorm
protein
peptide intensity (log2)
0
−1
−2
−3
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
sample
rowname
○ IQIVGLTELQSLAVGPR
△ Q9BT22
+ WDESWVQTVLPLVMDT
prognosis
🟥 OR
🟦 PD

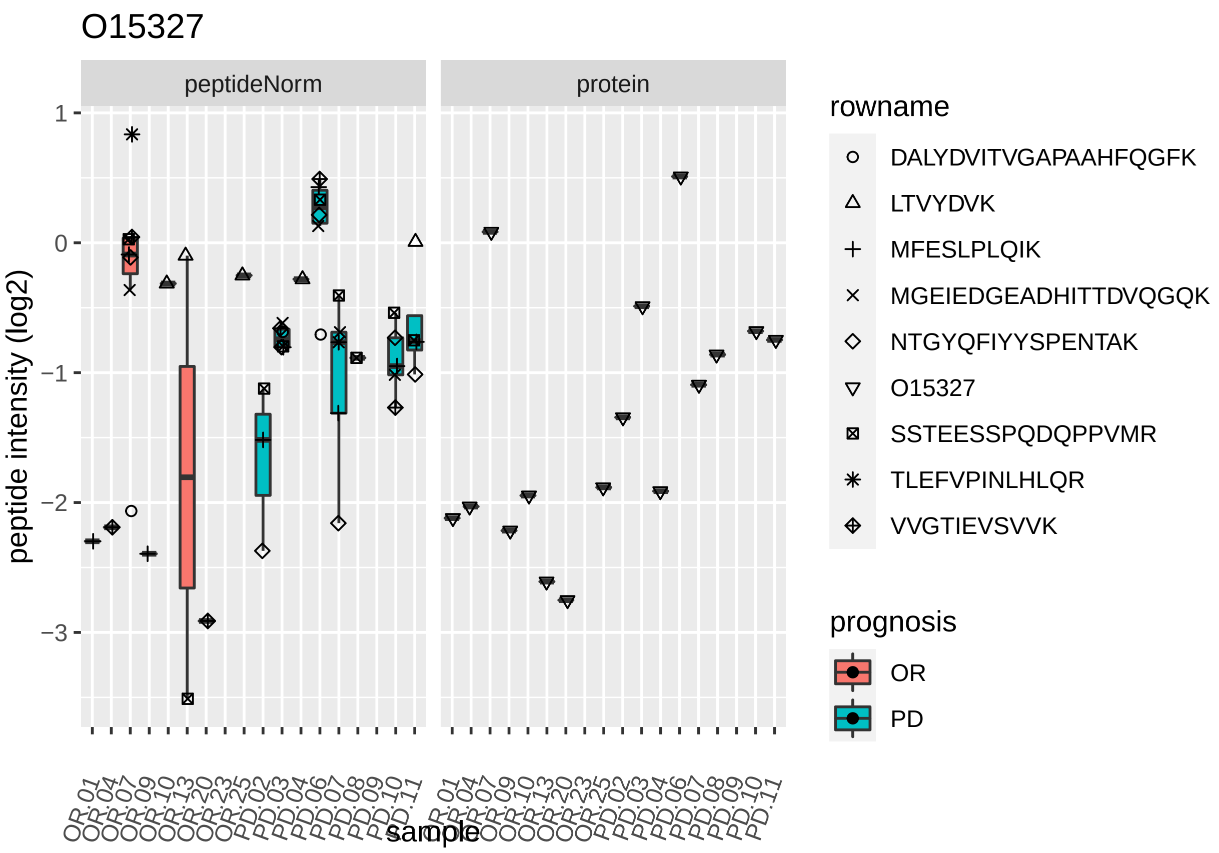

Q9UHQ9
peptideNorm
protein
value
2
0
−2
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

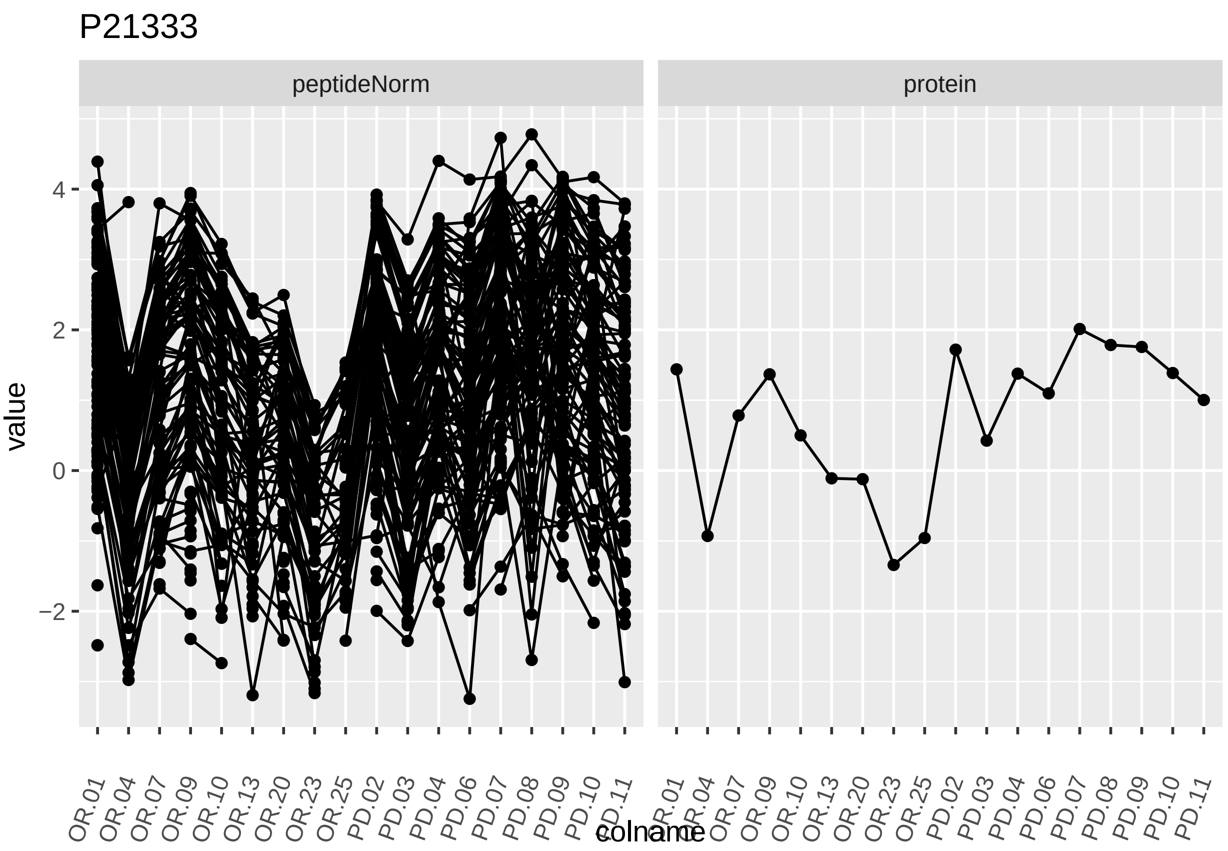

Q9UHQ9
peptideNorm
protein
peptide intensity (log2)
2
0
−2
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
sample
rowname
○ DIILREDLEELQAR
△ EDLEELQAR
+ FALPTAHHTLGLPVGK
× GFVTADMIR
◇ GHFNIQPNKK
▽ GIQTSPVLLASLGVGLVTLLGLAVGSYLVR
⊠ GPSGLLTYTGK
✳ IDGSLVIRPYTPVTSDEDQGYVDLVIK
◇ LGMIAGGTGITPMLQLIR
⊕ MSQYLDSLK
✡ Q9UHQ9
⊞ RPQVTLLDPNEK
⊠ VGDVVEFR
prognosis
🟥 OR
🟦 PD


Q92522
peptideNorm
protein
value
0
−1
−2
−3
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11


Q92522
peptideNorm
protein
peptide intensity (log2)
0
−1
−2
−3
sample
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
rowname
○ ALVQNDTLLQVK
△ GAPAAATAPAPTAHK
+ Q92522
× SVELEEALPVTTAEGMAK
prognosis
OR
PD


O15327
peptideNorm
protein
value
1
0
−1
−2
−3
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11


O15327
peptideNorm
protein
peptide intensity (log2)
1
0
−1
−2
−3
sample
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
rowname
○ DALYDVITVGAPAAHFQGFK
△ LTVYDVK
+ MFESLPLQIK
× MGEIEDGEADHITTDVQGQK
◇ NTGYQFIYYSPENTAK
▽ O15327
⊠ SSTEESSPQDQPPVMR
✳ TLEFVPINLHLQR
⊕ VVGTIEVSVVK
prognosis
OR
PD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protein
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OR.04
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OR.09
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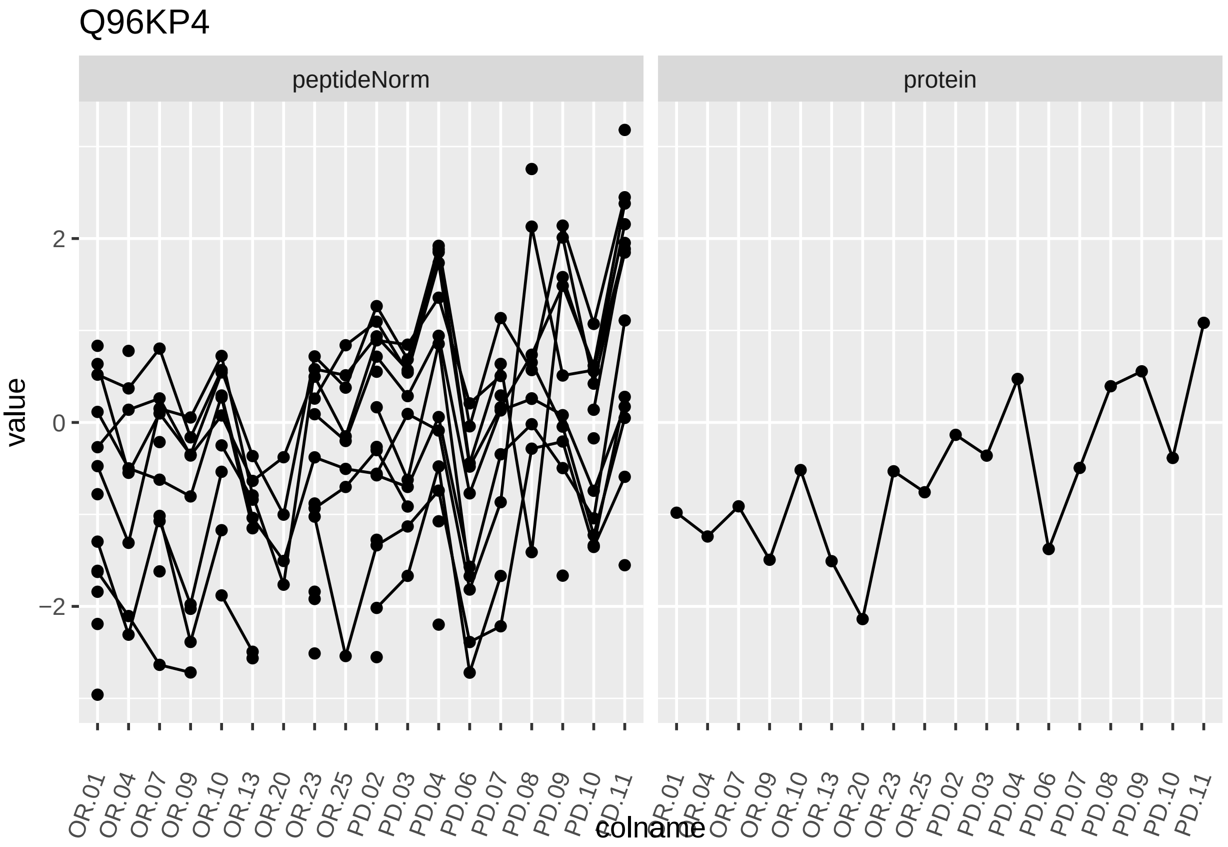
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

	)	GAGSYTIMVLFADQATPTSPIR	<	LVSNHSLHETSSVFVDSLTK
VK	*	GAGTGGLGLAVEGPSEAK	=	LYSVSYLLK
TYGGHQVPGSPFK	+	GKLDVQFSGLTK	>	MDCQECPEGYR
	,	GLVEPVDVVDNADGTQTVNYVPSR	?	NDNDTFTVK
IVTITWGGQNIGR	−	GQHVPGSPFQFTVGPLGEGGAHK	@	NGHVGISFVPK
	.	GTVEPQLEAR	A	NGQHVASSPIPVVISQSEIGDAS
	/	HTAMVSWGGVSIPNSPFR	B	P21333
	0	IANLQTDLSDGLR	C	PGAPLRPK
EIVDPNVDEHSVMTYLSQFPK	1	IECDDKGDGSCDVR	D	RAEFTVETR
	2	IPEISIQDMTAQVTSPSGK	E	RAPSVANVGSHCDLSLK
PFPLEAVAPTKPSK	3	IVGPSGAAVPCK	F	RLTVSSLQESGLK
	4	KGEITGEVR	G	SADFVVEAIGDDVGTLGFSVEG
	5	KTHIQDNHDGTYTVAYVPDVTGR	H	SAGQGEVLVYVEDPAGHQEEAK
	6	LDVQFSGLTK	I	SPFEVYVDK
	7	LIALLEVLSQKK	J	SPFSVAVSPSLDLSK
QPSVQPPLR	8	LLGWIQNKLPQLPITNFSR	K	SPYTVTVGQACNPSACR
DAR	9	LQVEPAVDTSGVQCYGPGIEGQGVFR	L	TFSVWYVPEVTGTHK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PD.03
PD.04
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PD.07
PD.08
PD.09
PD.10
PD.11
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OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
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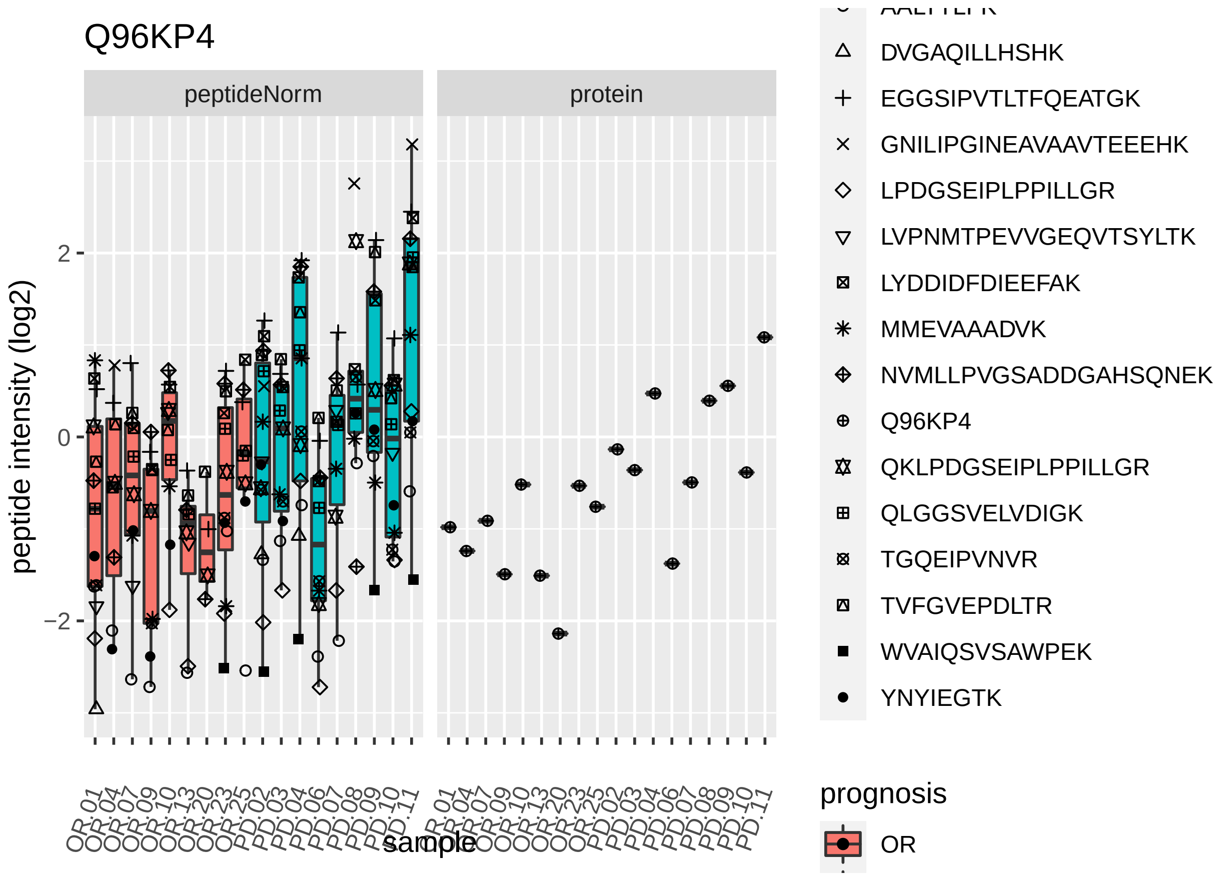
PD.08
PD.09
PD.10
PD.11
colname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peptideNorm
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peptide intensity (log2)
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OR.07
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OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
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DVGAQILLHSHK
EGGSIPVTLTFQEATGK
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LPDGSEIPLPPILLGR
LVPNMTPEVVGEQVTSYLTK
LYDDIDFDIEEFAK
MMEVAAADVK
NVMLLPVGSADDGAHSQNEK
Q96KP4
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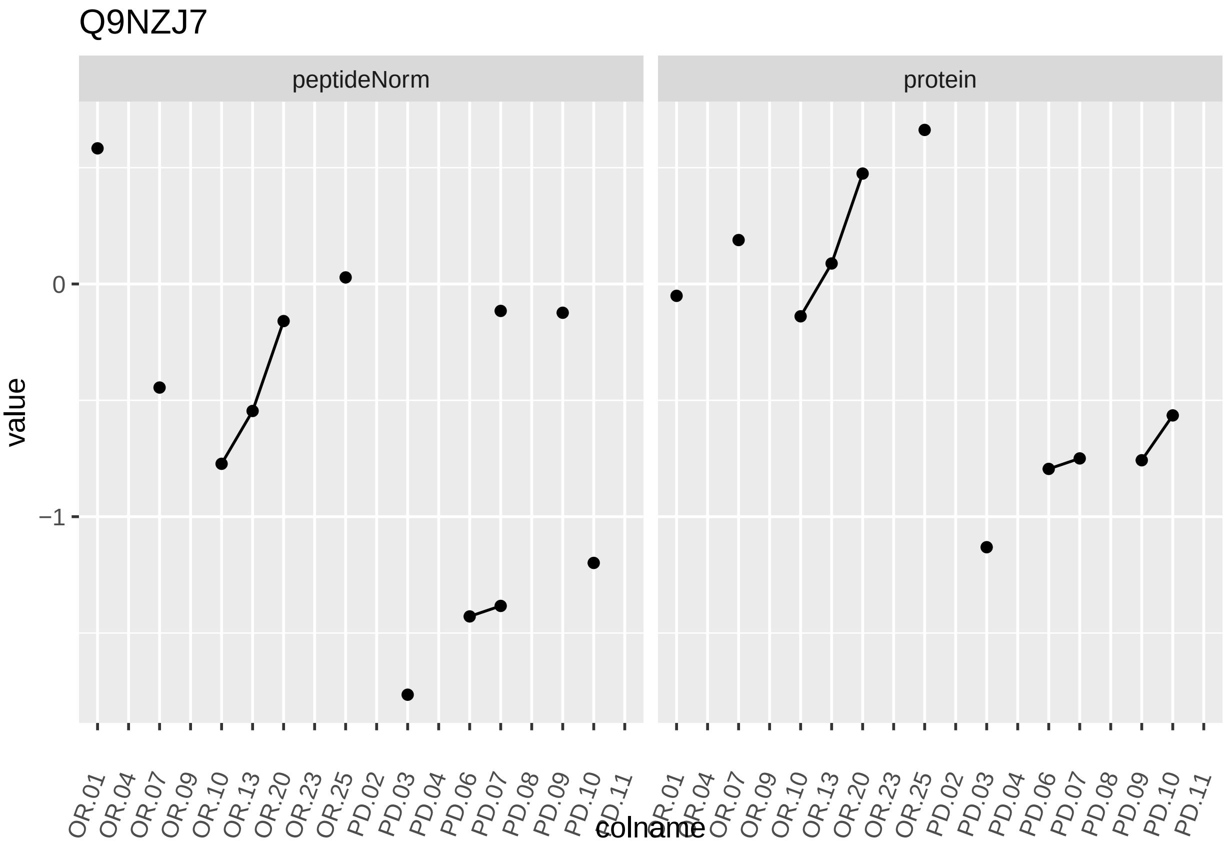
prognosis
OR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PD.06
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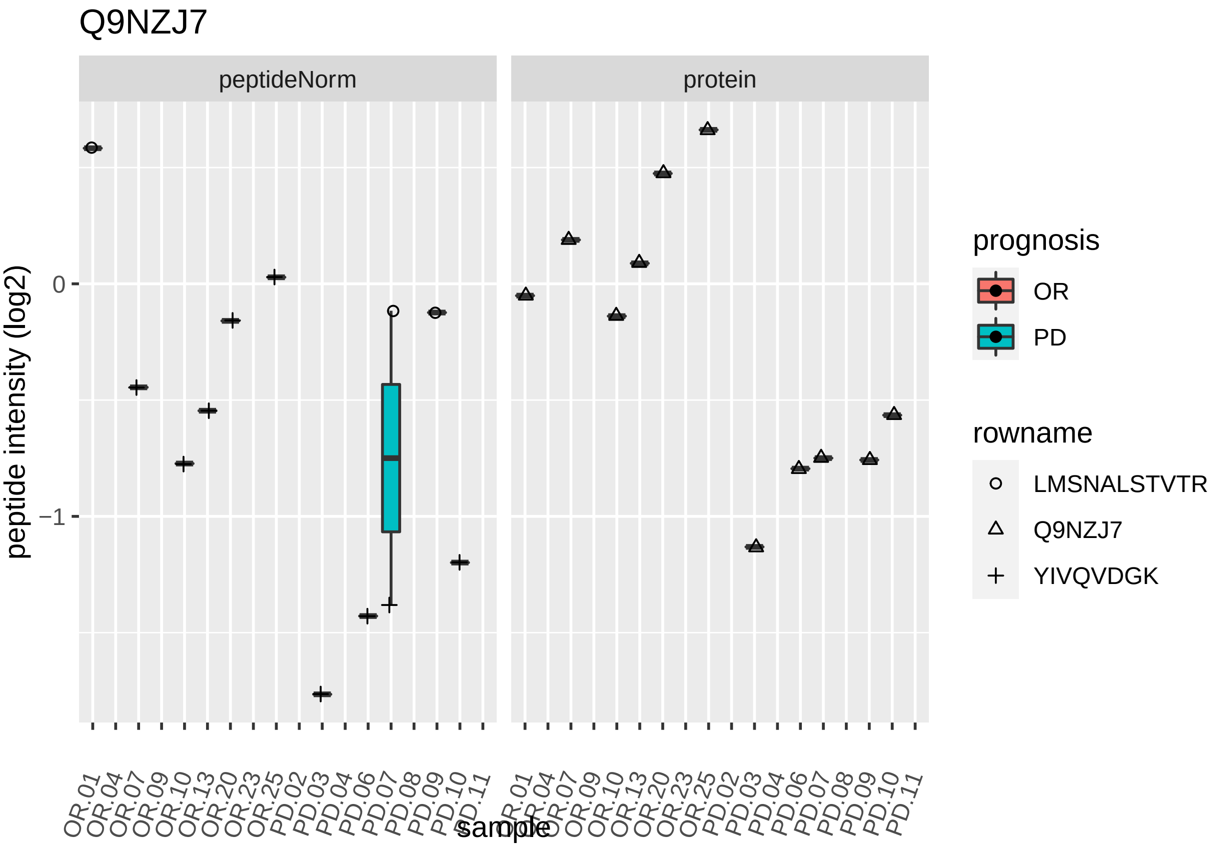
PD.10
PD.11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OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
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PD.10
PD.11
prognosis
OR
PD
rowname
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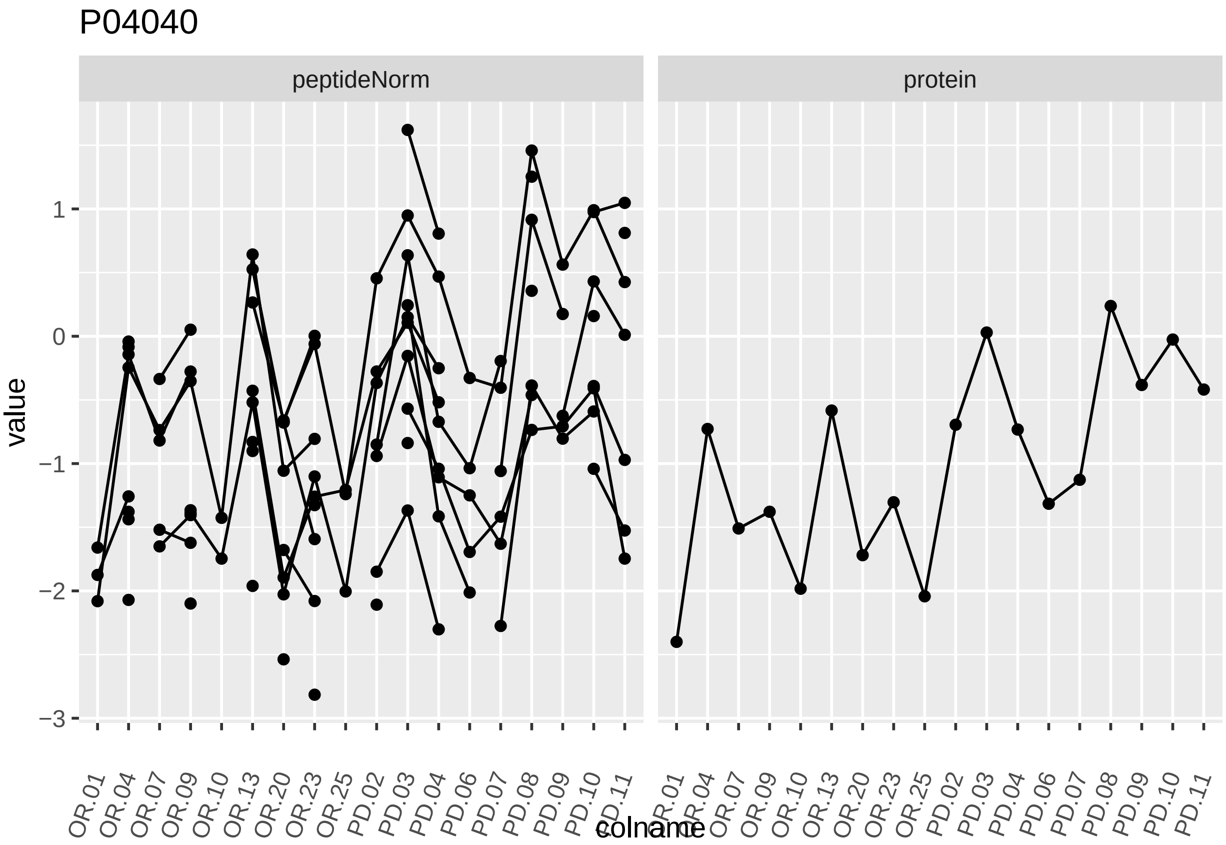
YIVQVDGK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OR.13
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PD.02
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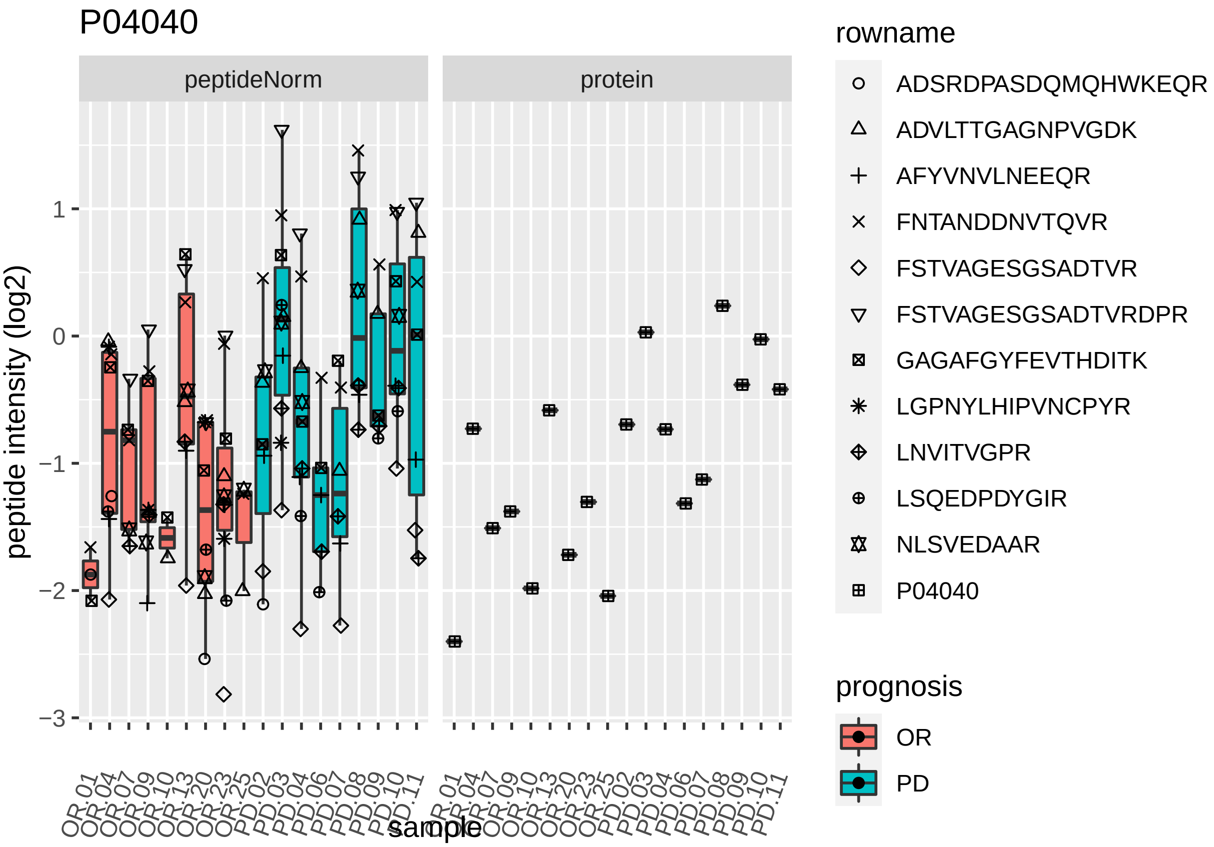
PD.09
PD.10
PD.11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peptideNorm
protein
peptide intensity (log2)
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0
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−2
−3
sample
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
rowname
ADSRDPASDQMQHWKEQR
ADVLTTGAGNPVGDK
AFYVNVLNEEQR
FNTANDDNVTQVR
FSTVAGESGSADTVR
FSTVAGESGSADTVRDPR
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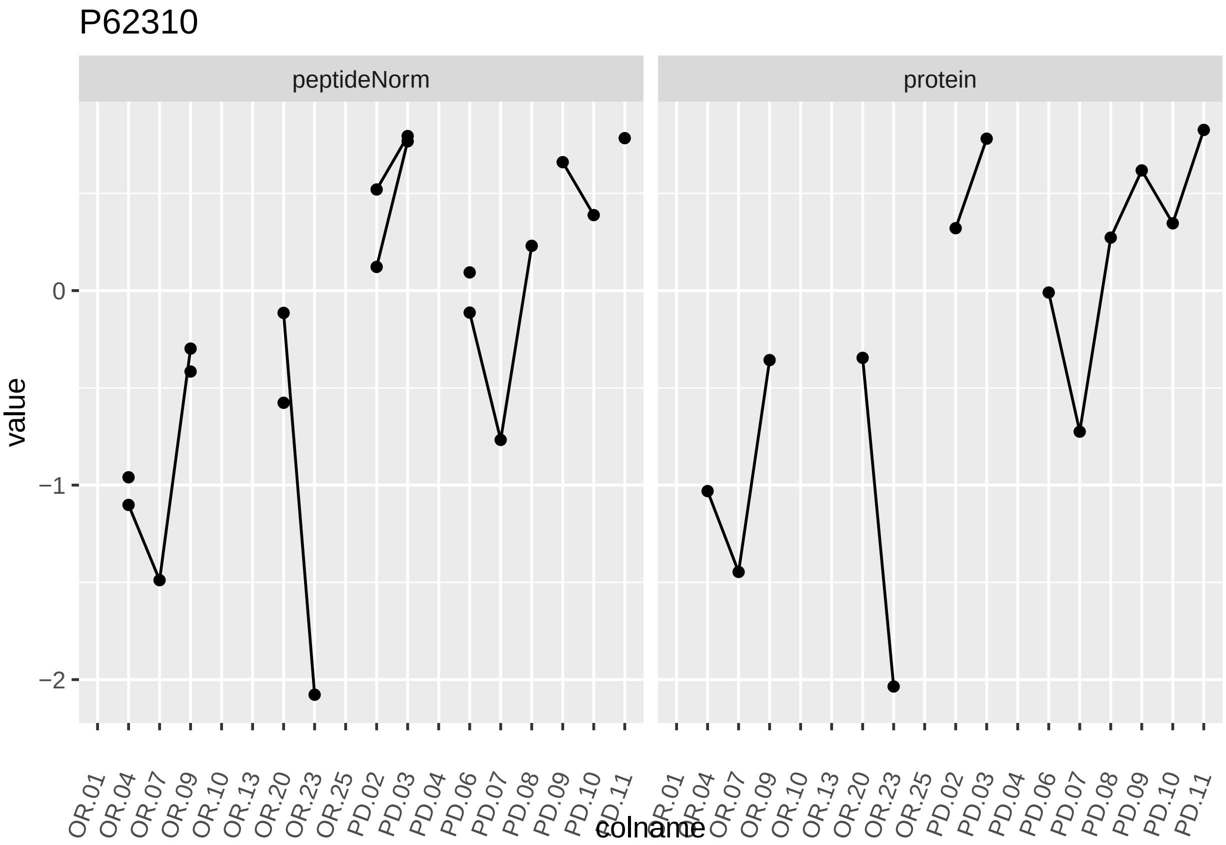
NLSVEDAAR
P04040
prognosis
OR
PD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value
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colname
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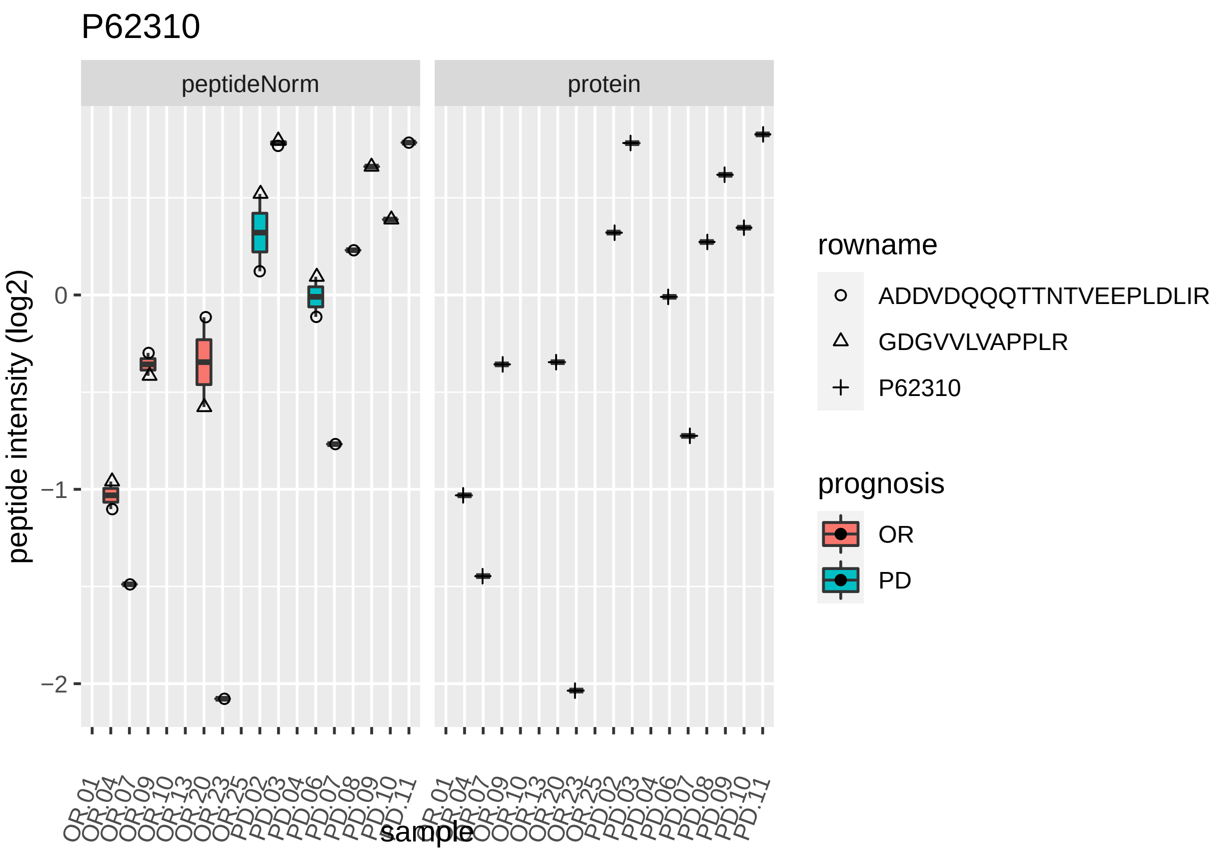
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11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protein
peptide intensity (log2)
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−1
−2
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
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sample
rowname
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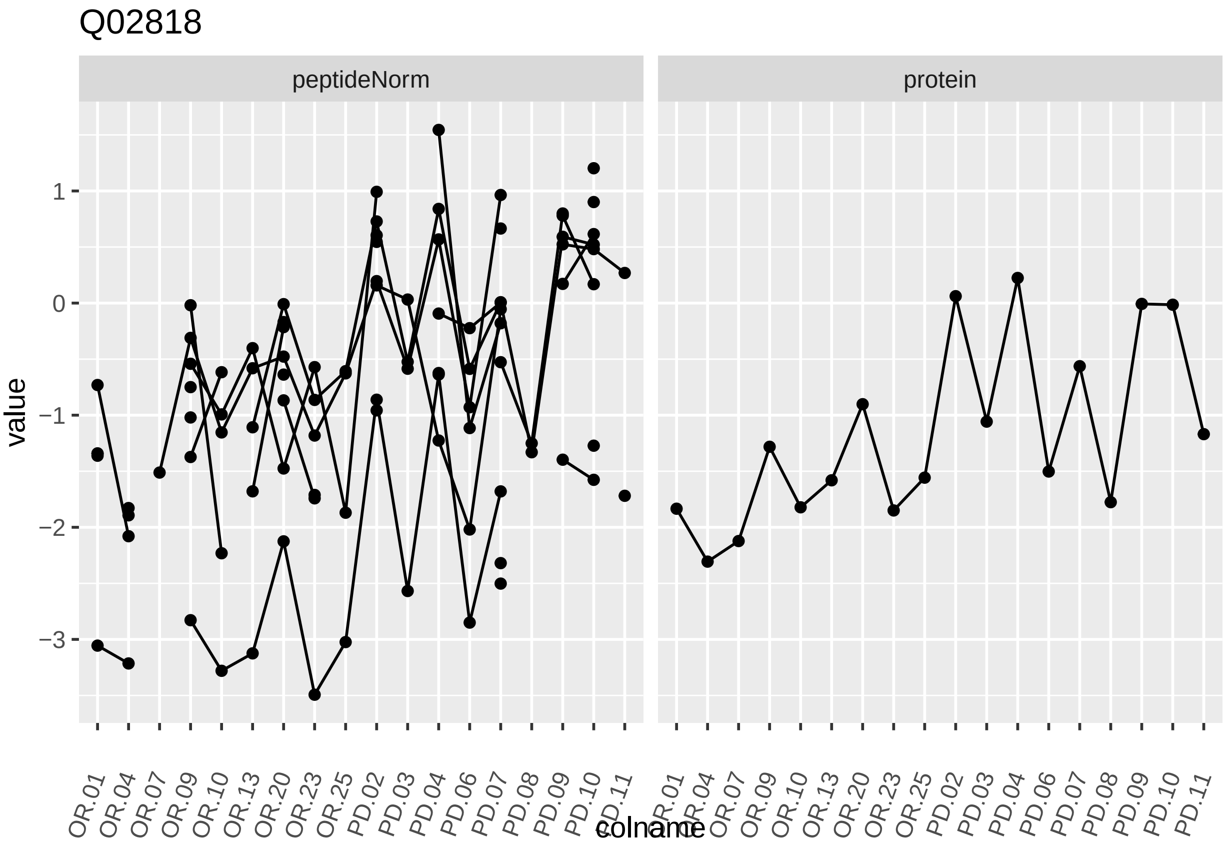
P62310
prognosis
OR
PD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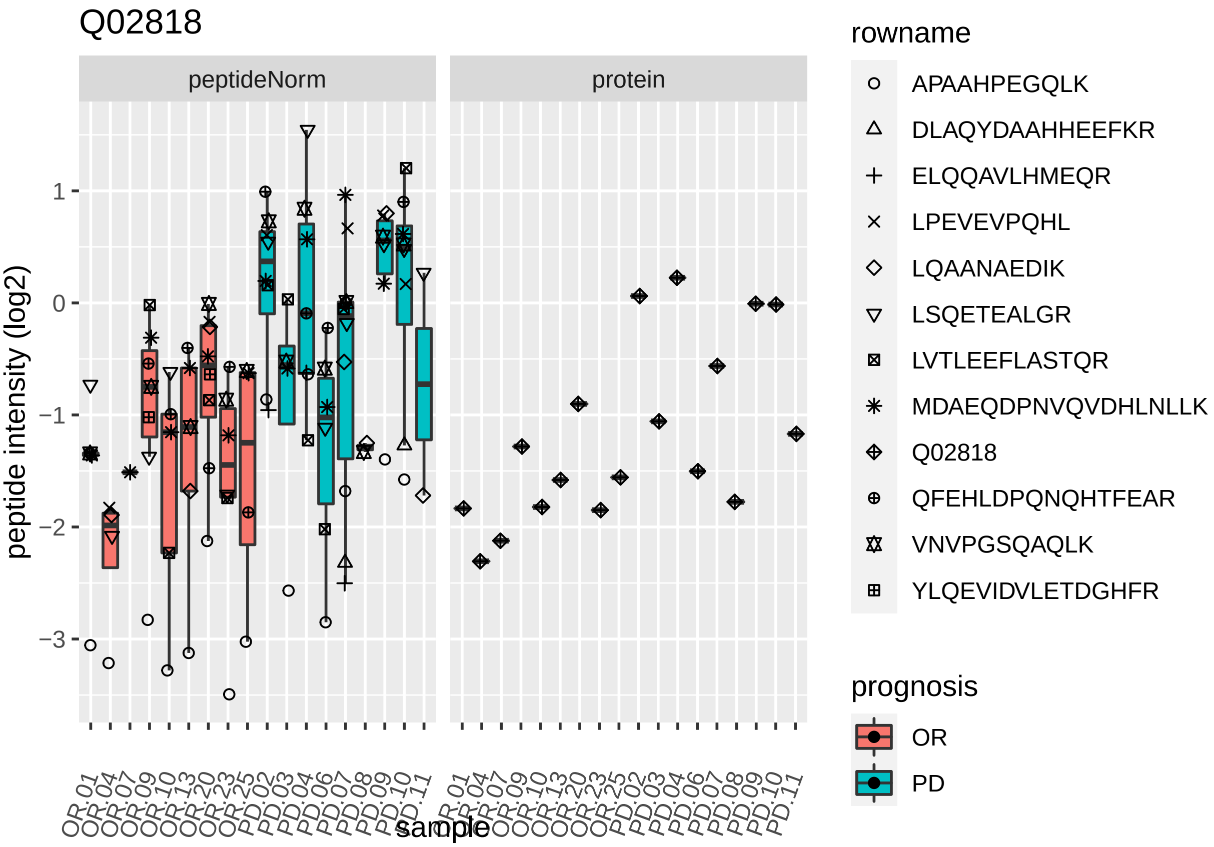
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11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peptideNorm
protein
peptide intensity (log2)
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0
−1
−2
−3
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OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
sample
rowname
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LPEVEVPQHL
LQAANAEDIK
LSQETEALGR
LVTLEEFLASTQR
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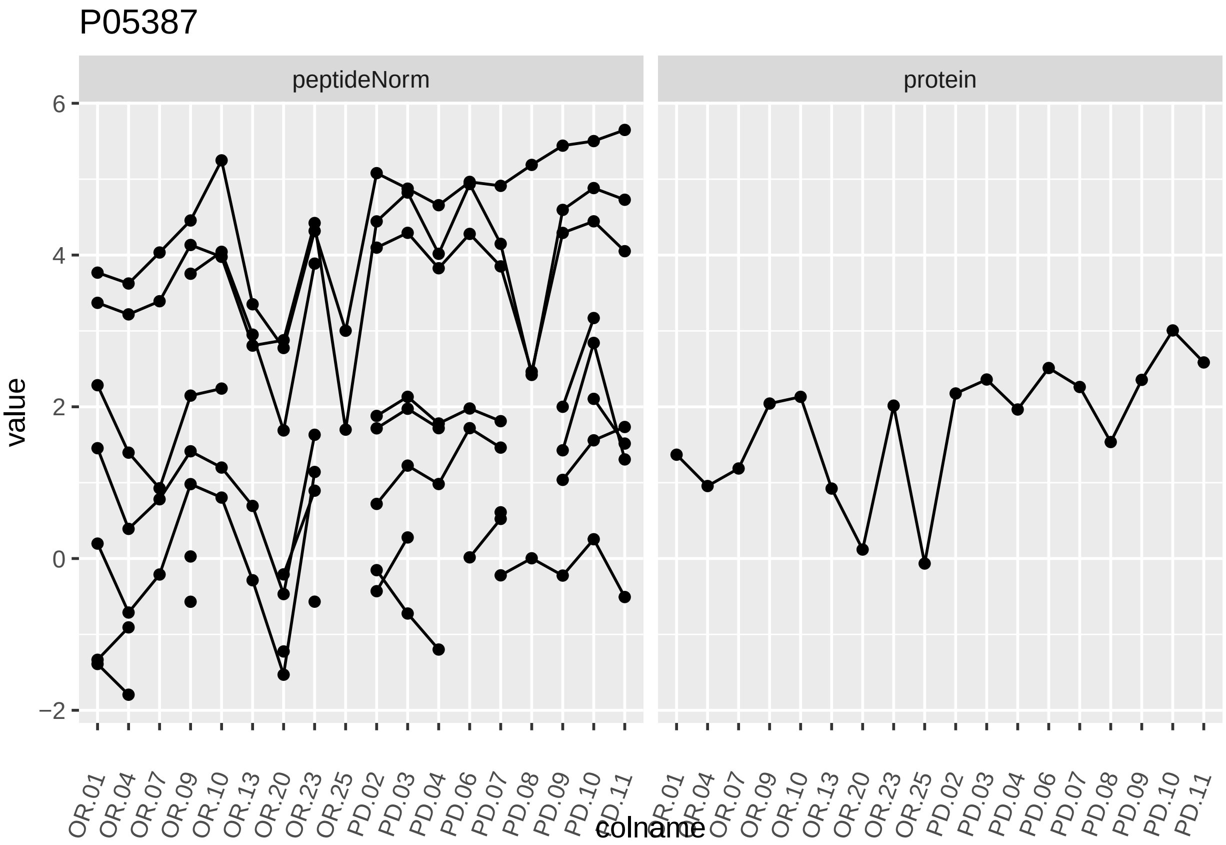
Q02818
QFEHLDPQNQHTFEAR
VNVPGSQAQLK
YLQEVIDVLETDGHFR
prognosis
OR
PD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protein
value
colname
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OR.04
OR.07
OR.09
OR.10
OR.13
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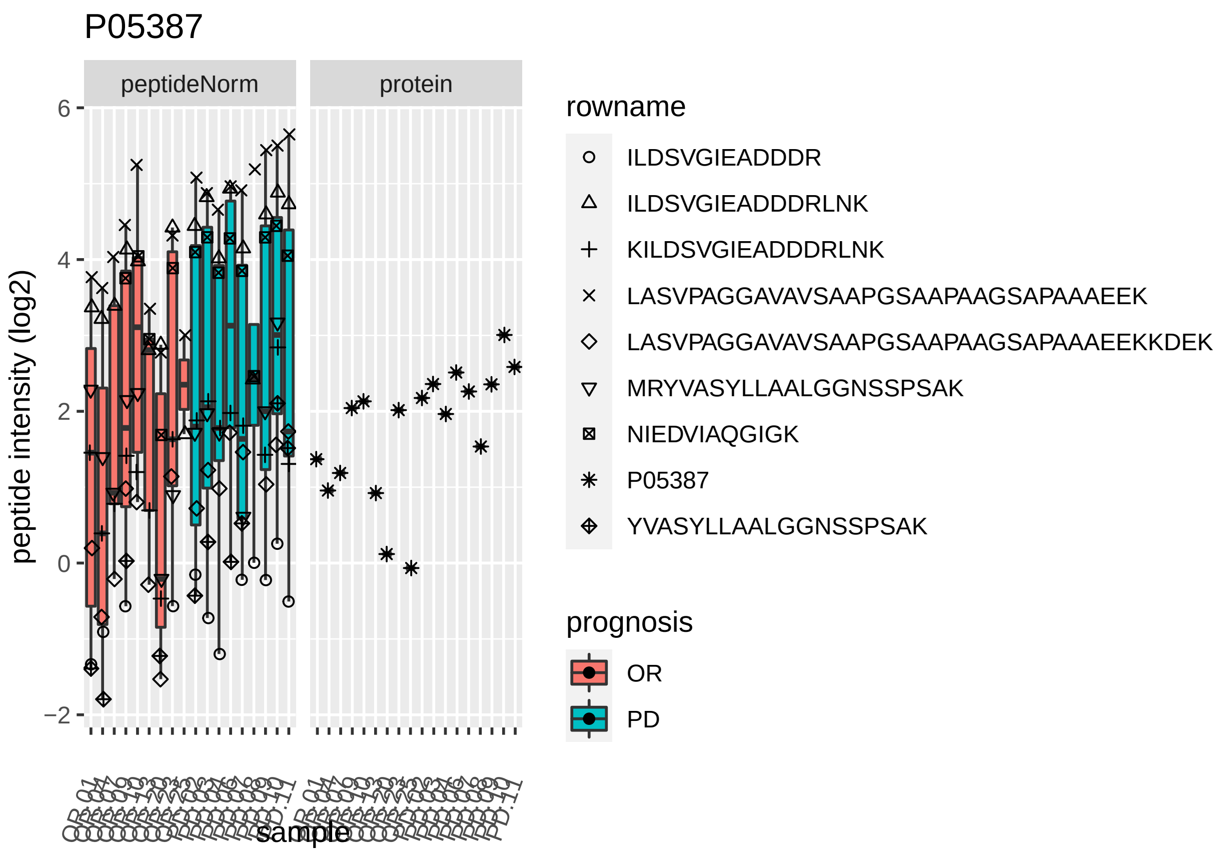
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11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peptide intensity (log2)
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LASVPAGGAVAVSAAPGSAAPAAGSAPAAAEEKKDEK
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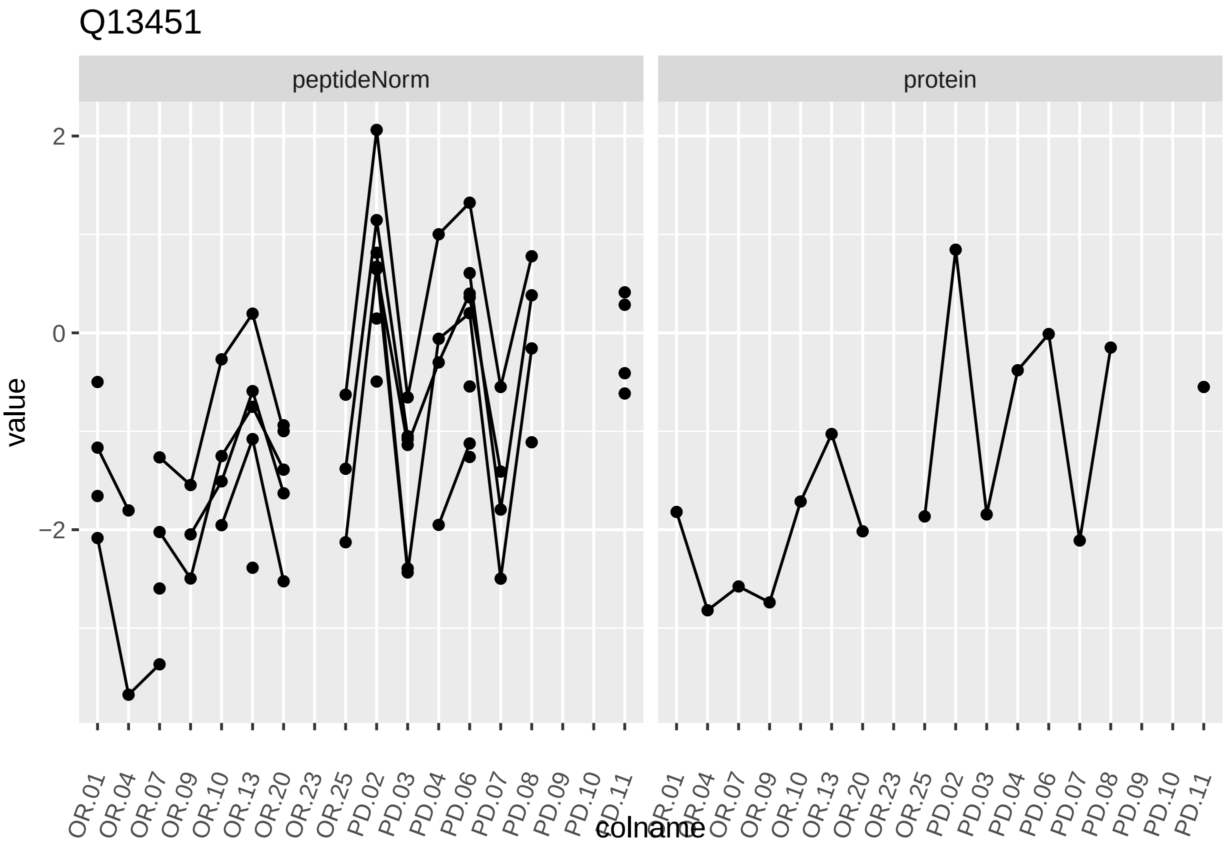
P05387
YVASYLLAALGGNSSPSAK
prognosis
OR
PD



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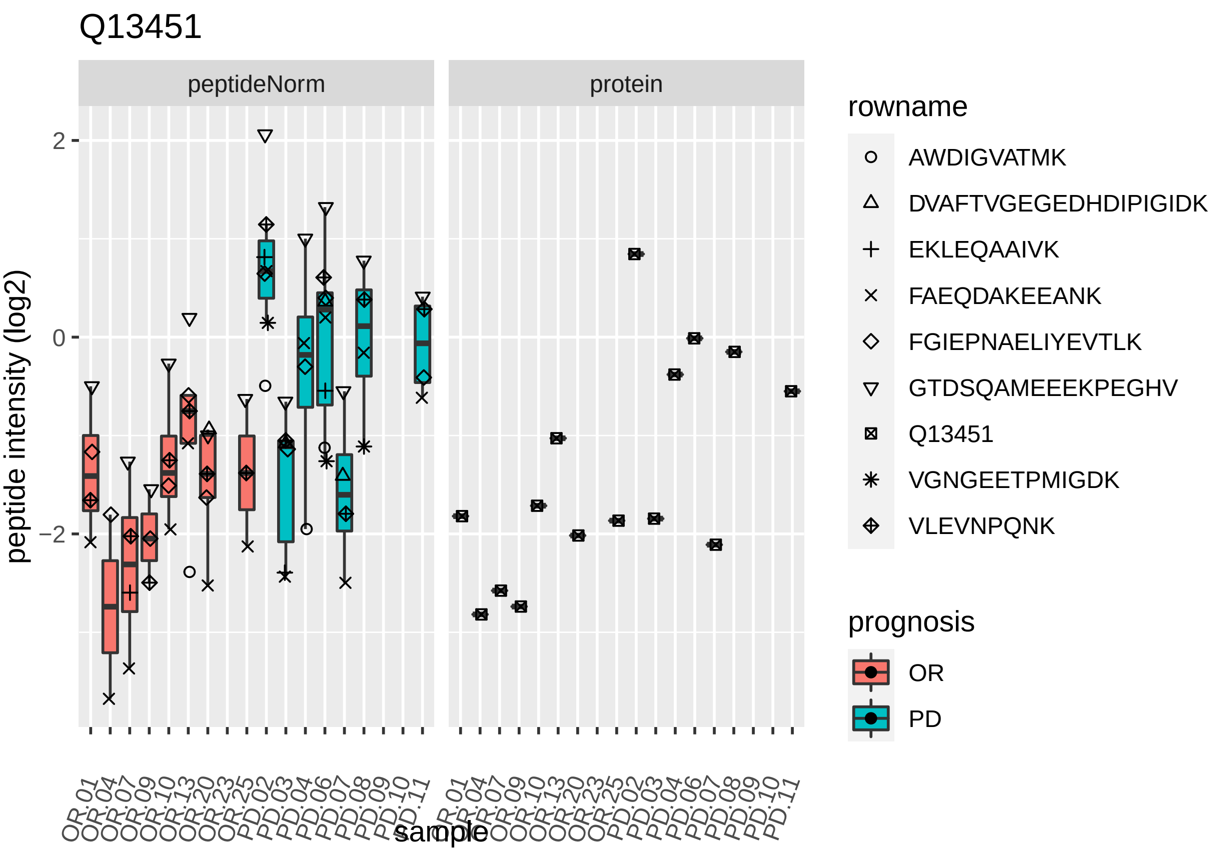
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11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peptideNorm
protein
peptide intensity (log2)
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0
−2
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OR.04
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OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
rowname
AWDIGVATMK
DVAFTVGEGEDHDIPIGIDK
EKLEQAAIVK
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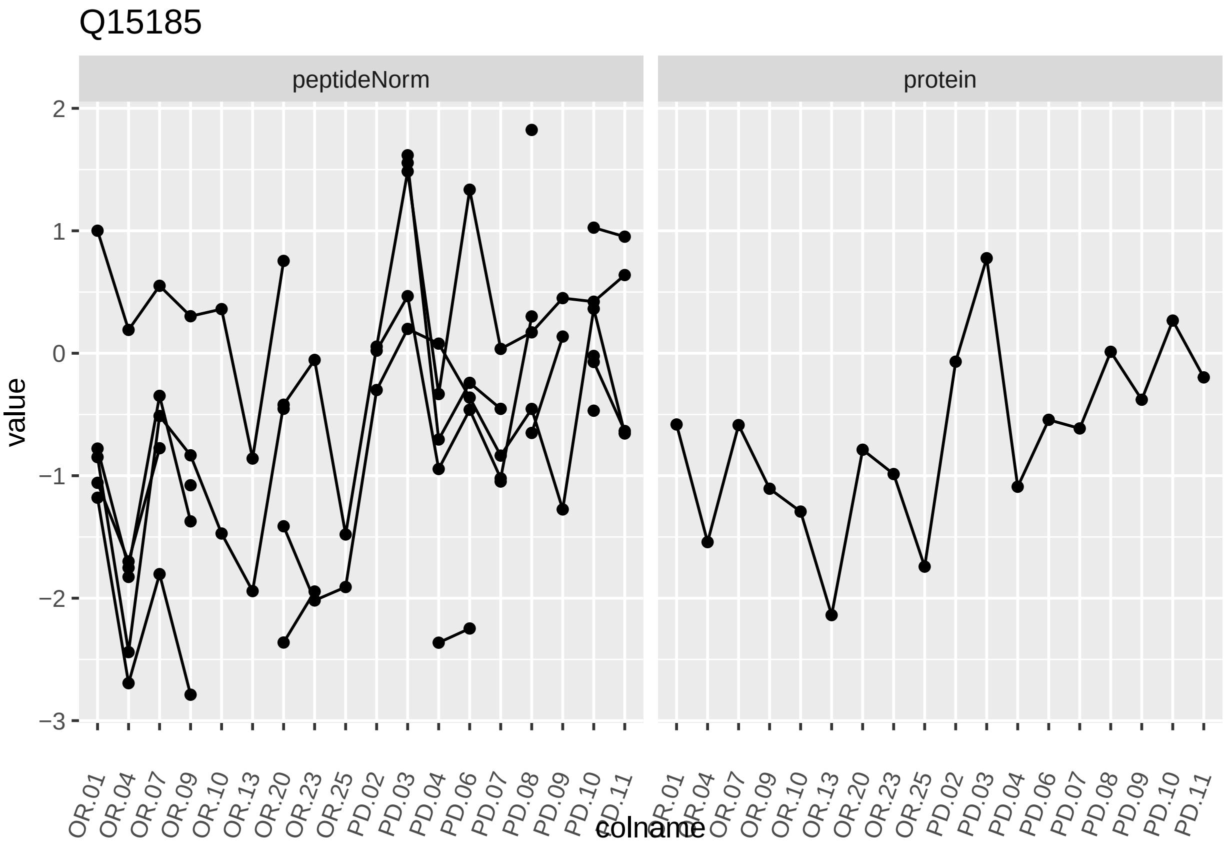
FGIEPNAELIYEVTLK
GTDSQAMEEEKPEGHV
Q13451
VGNGEETPMIGDK
VLEVNPQNK
prognosis
OR
PD



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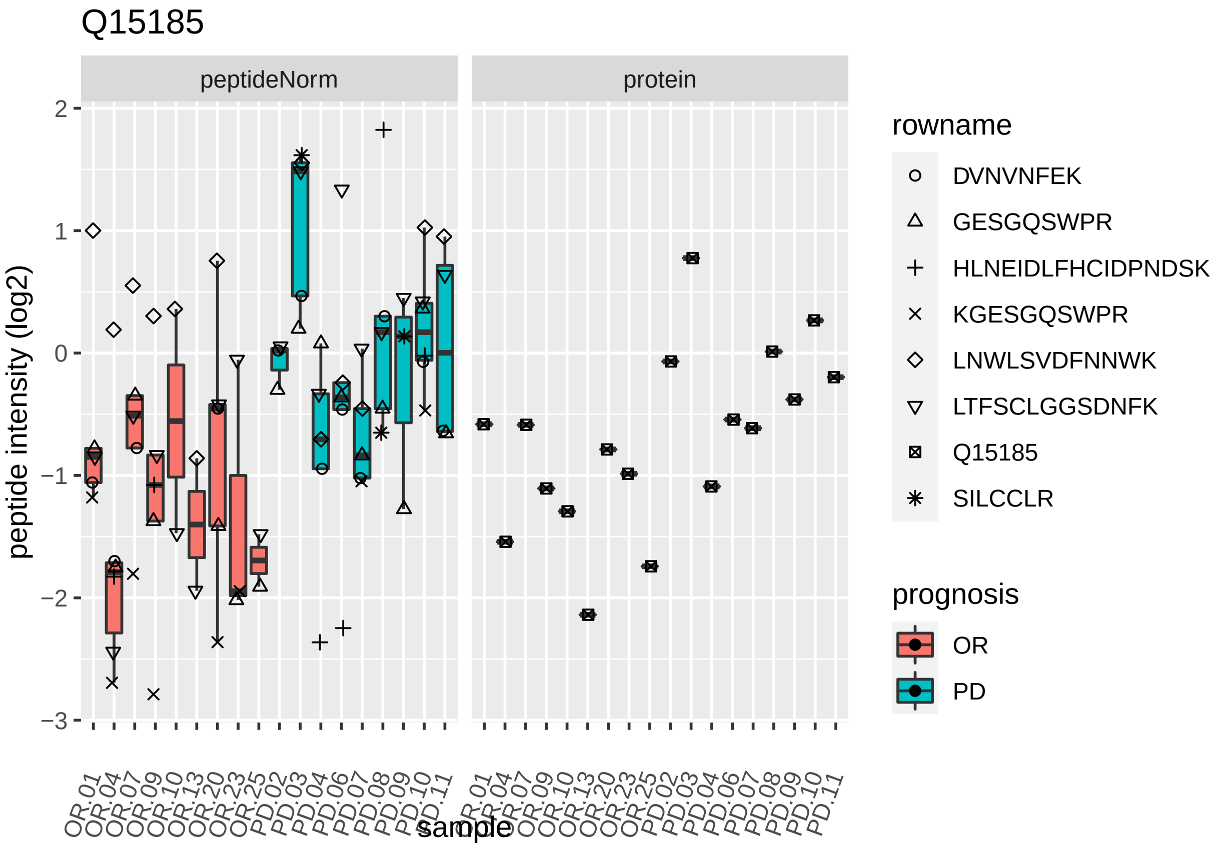
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11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protein
peptide intensity (log2)
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−2
−3
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OR.07
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OR.13
OR.20
OR.23
OR.25
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PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
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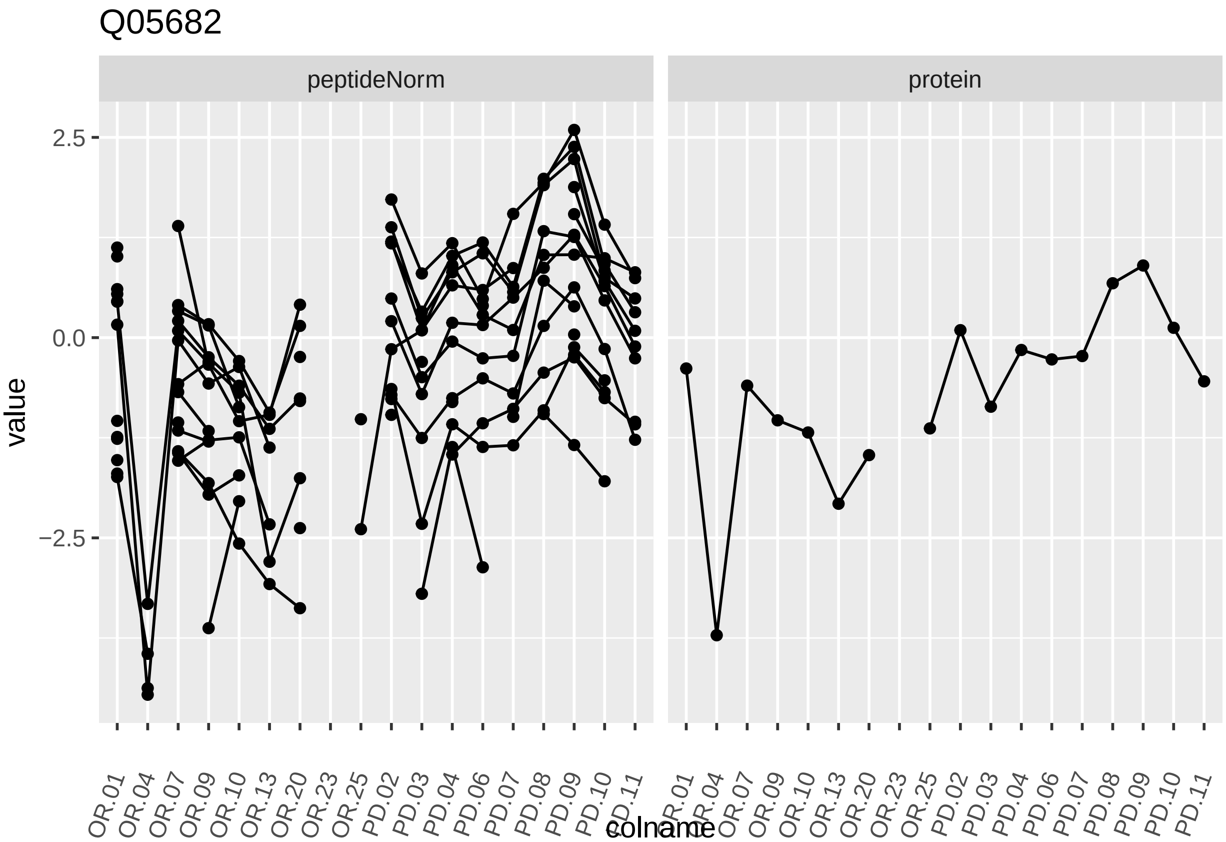
LNWLSVDFNNWK
LTFSCLGGSDNFK
Q15185
SILCCLR
prognosis
OR
PD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OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
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OR.10
OR.13
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OR.25
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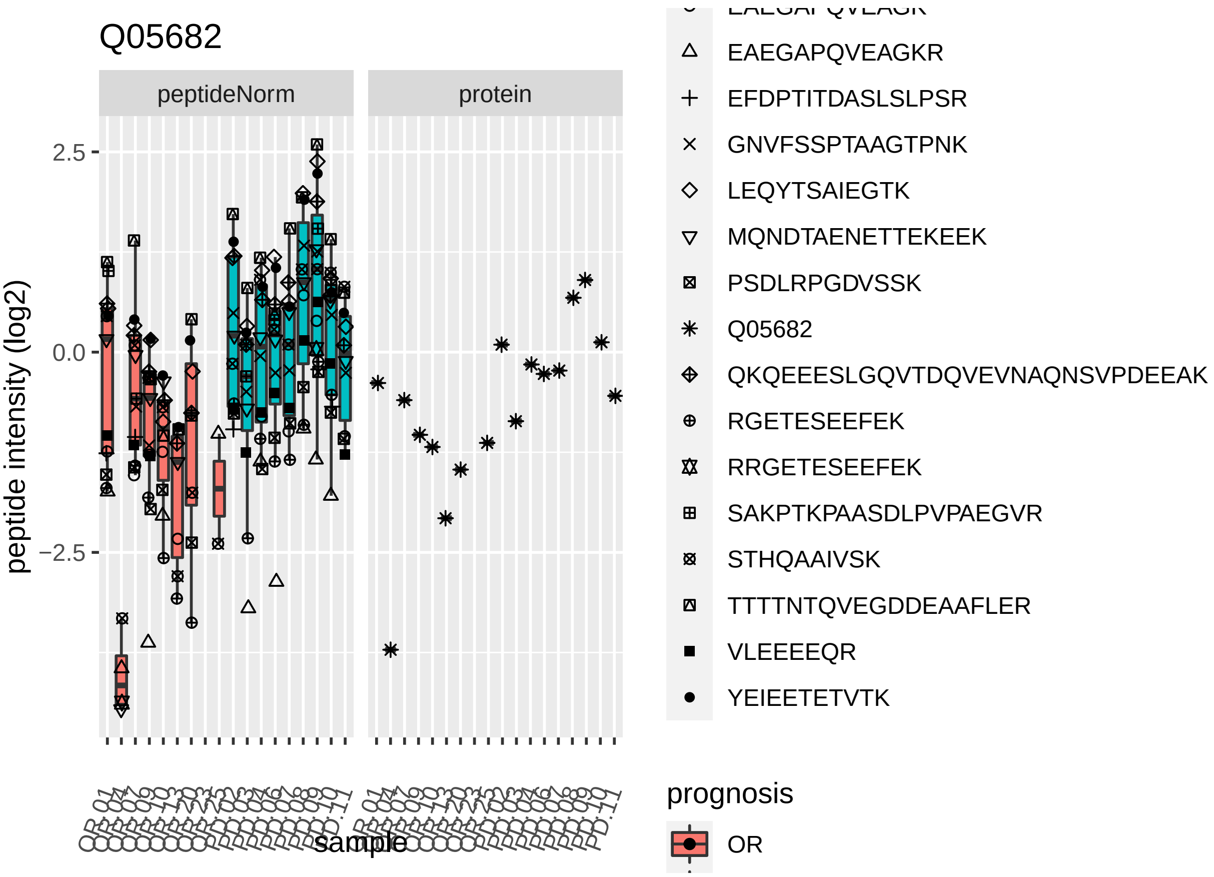
PD.10
PD.11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PSDLRPGDVSSK
Q05682
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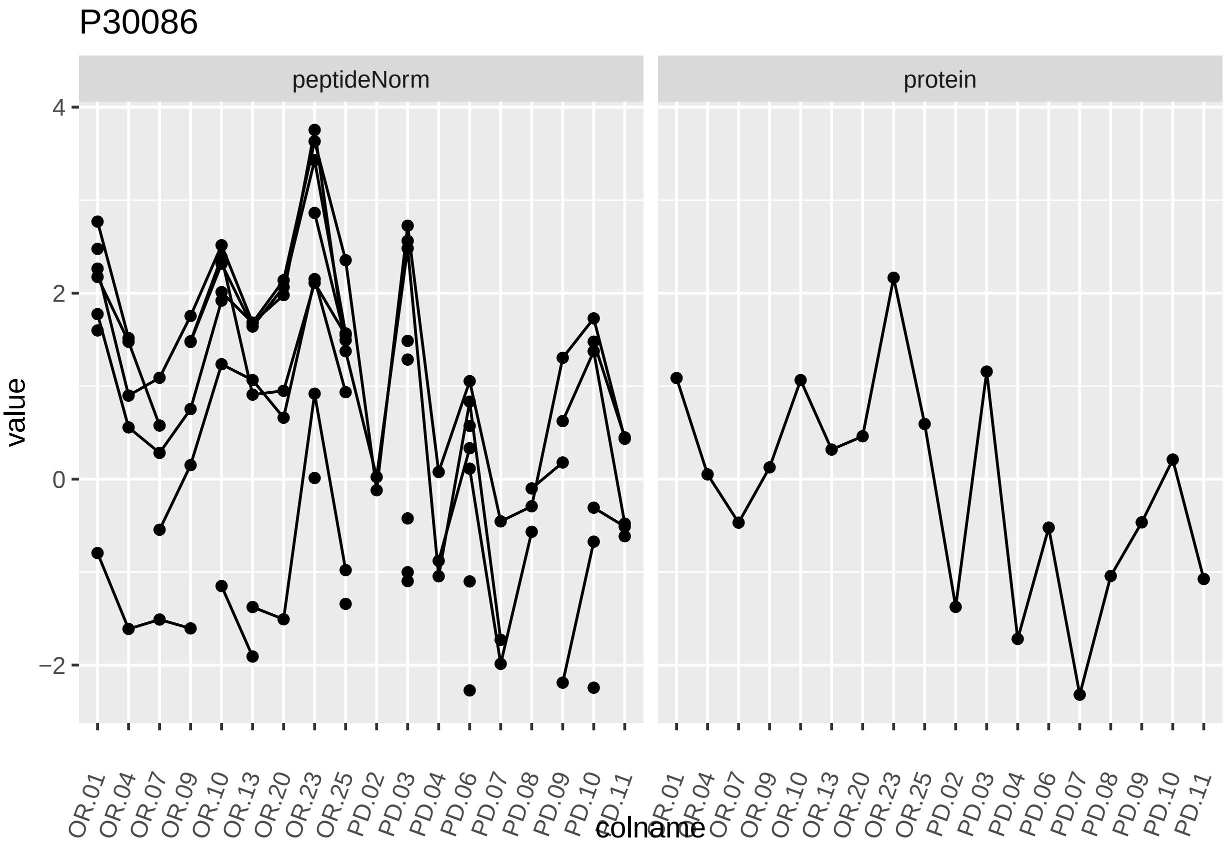
prognosis
OR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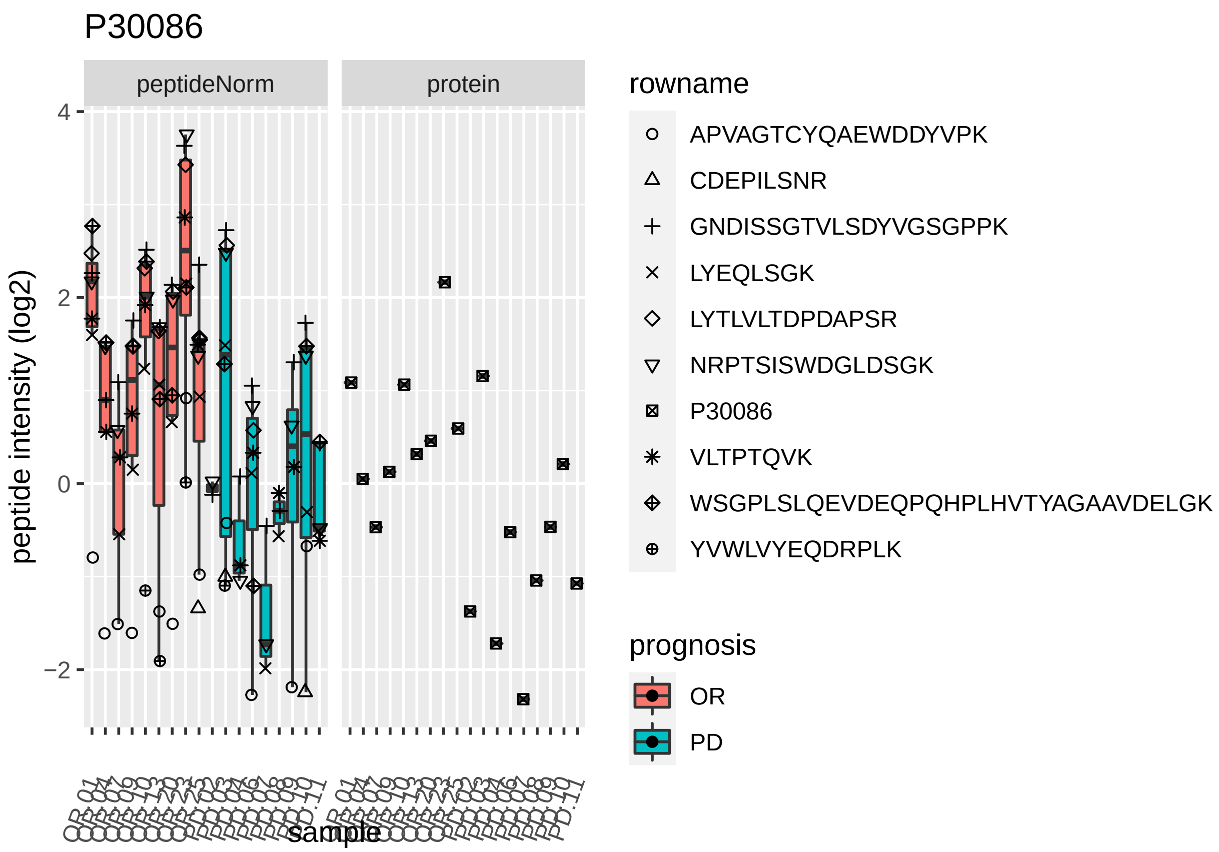
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11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+ GNDISSGTVLSDYVGSGPPK
× LYEQLSGK
◇ LYTLVLTDPDAPSR
▽ NRPTSISWDGLDSGK
⊠ P30086
✳ VLTPTQVK
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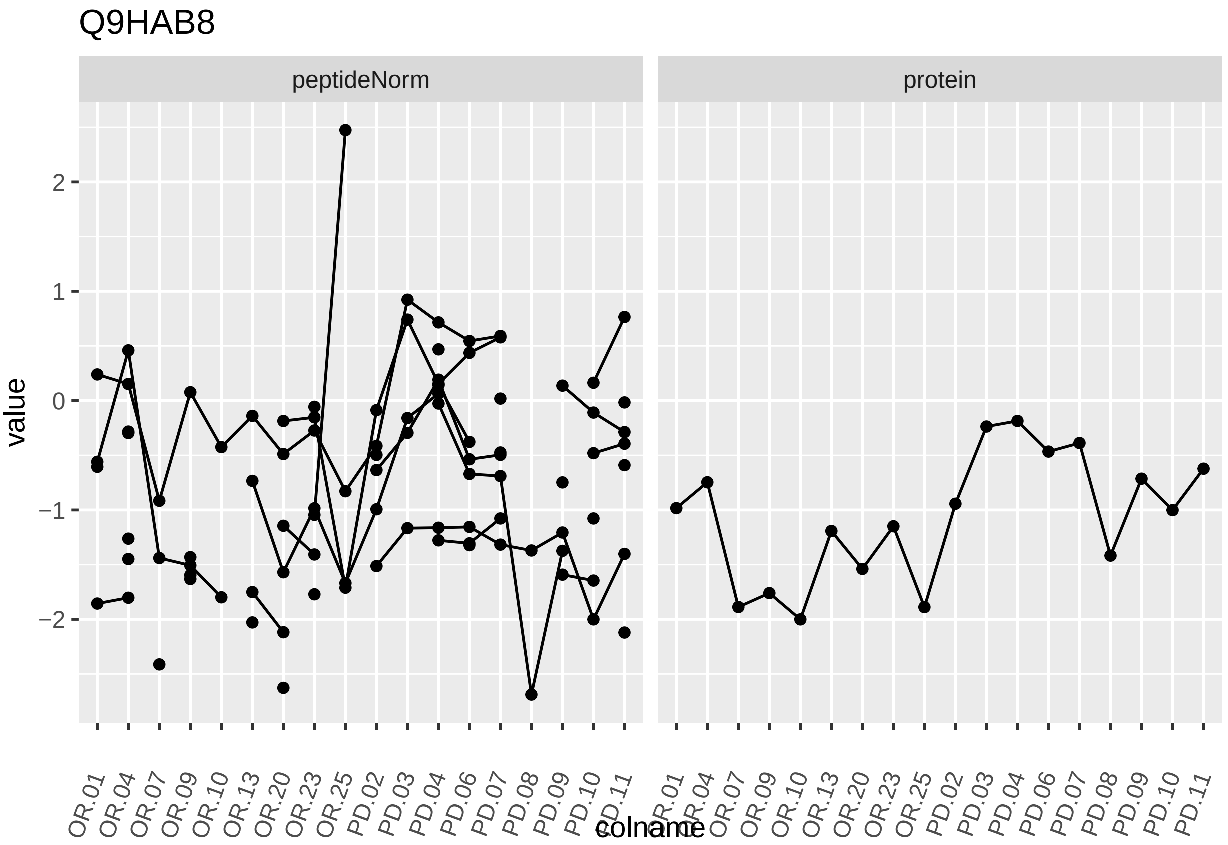
prognosis
🟥 OR
🟦 PD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OR.13
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OR.25
PD.02
PD.03
PD.04
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PD.08
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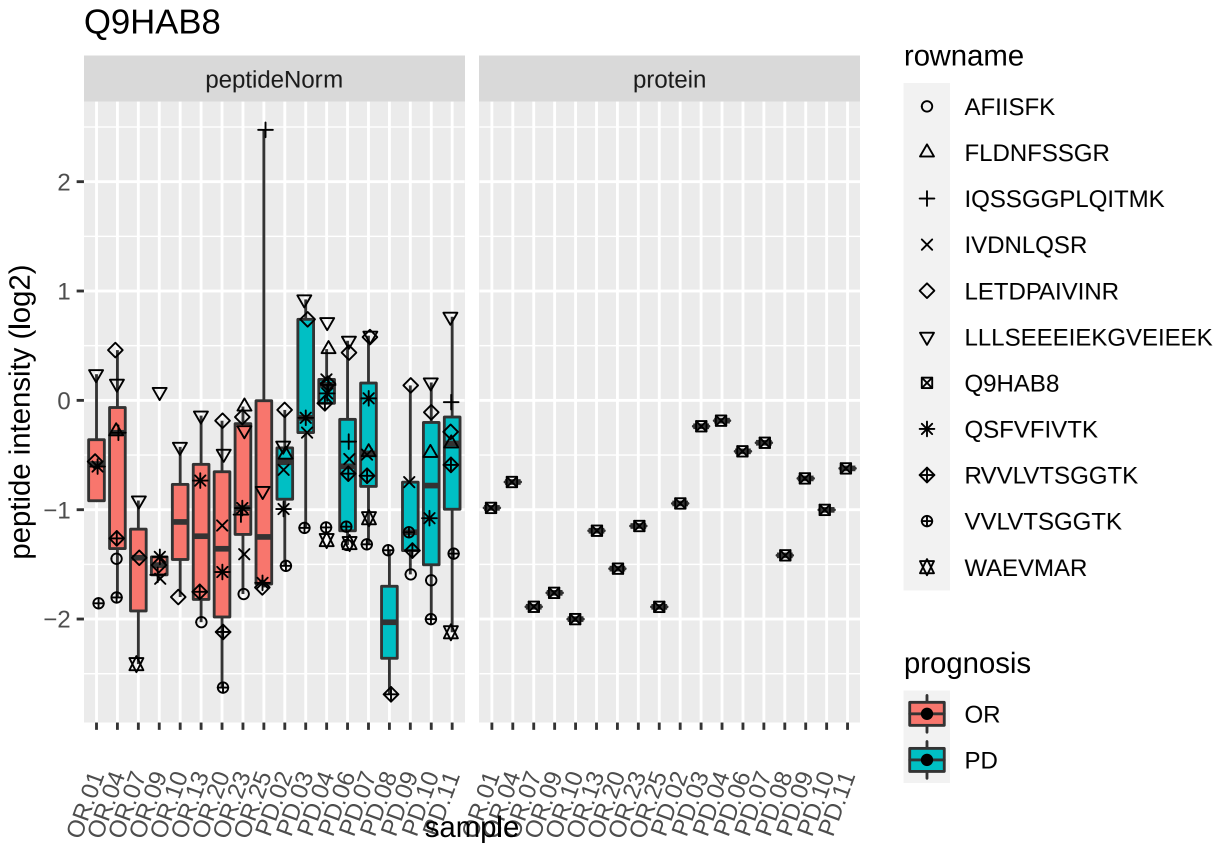
PD.11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peptideNorm
protein
peptide intensity (log2)
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−1
−2
sample
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OR.07
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OR.20
OR.23
OR.25
PD.02
PD.03
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PD.08
PD.09
PD.10
PD.11
rowname
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prognosis
OR
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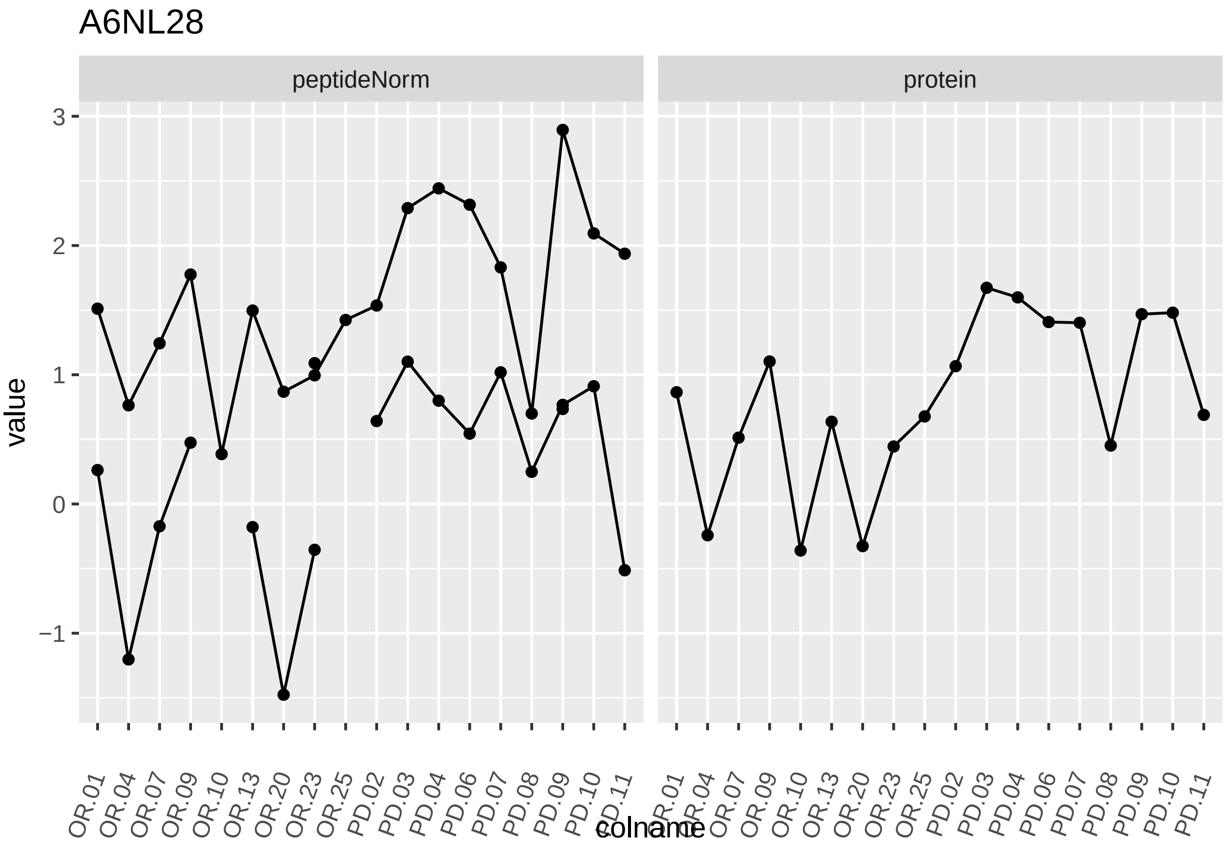
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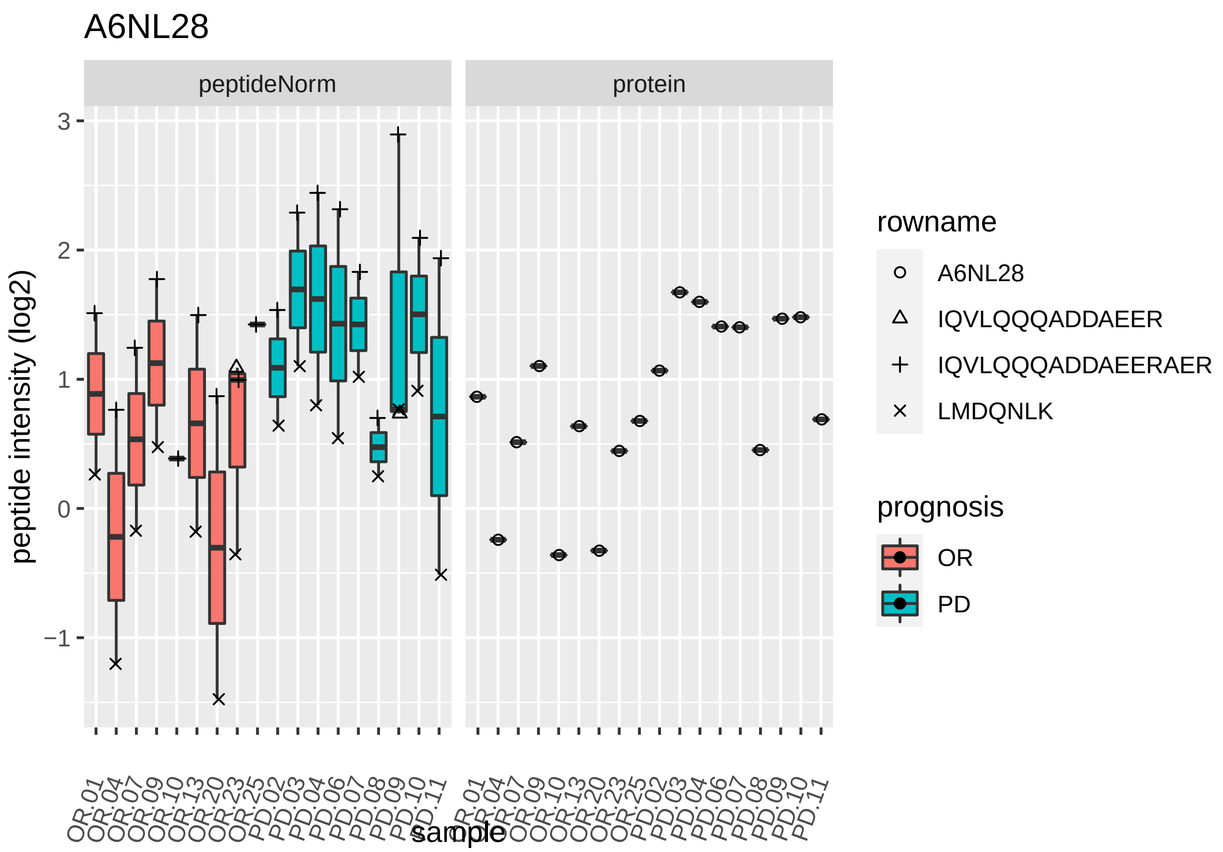
PD.10
PD.11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protein
peptide intensity (log2)
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−1
sample
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OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
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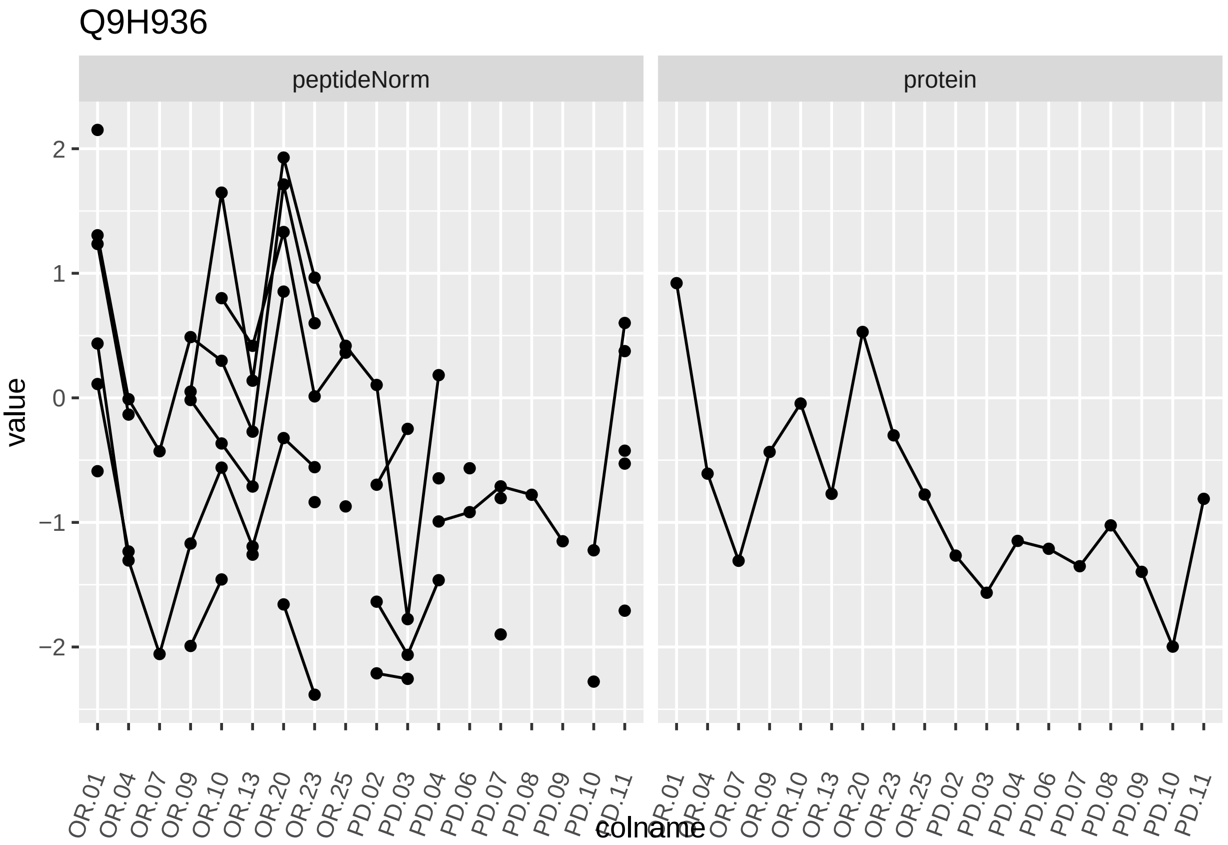
prognosis
OR
PD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OR.13
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PD.03
PD.04
PD.06
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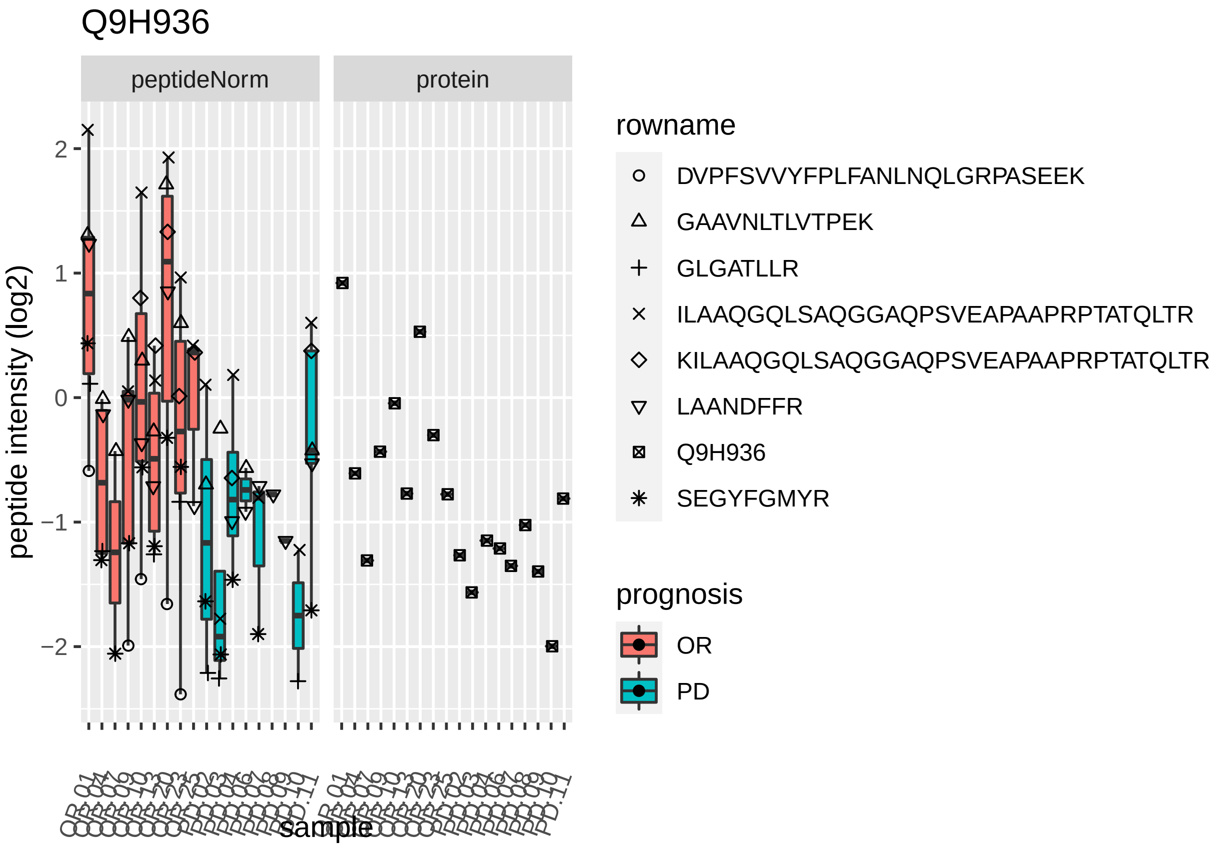
PD.10
PD.11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peptide intensity (log2)
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sample
rowname
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△ GAAVNLTLVTPEK
+ GLGATLLR
× ILAAQGQLSAQGGAQPSVEAPAAPRPTATQLTR
◇ KILAAQGQLSAQGGAQPSVEAPAAPRPTATQLTR
▽ LAANDFFR
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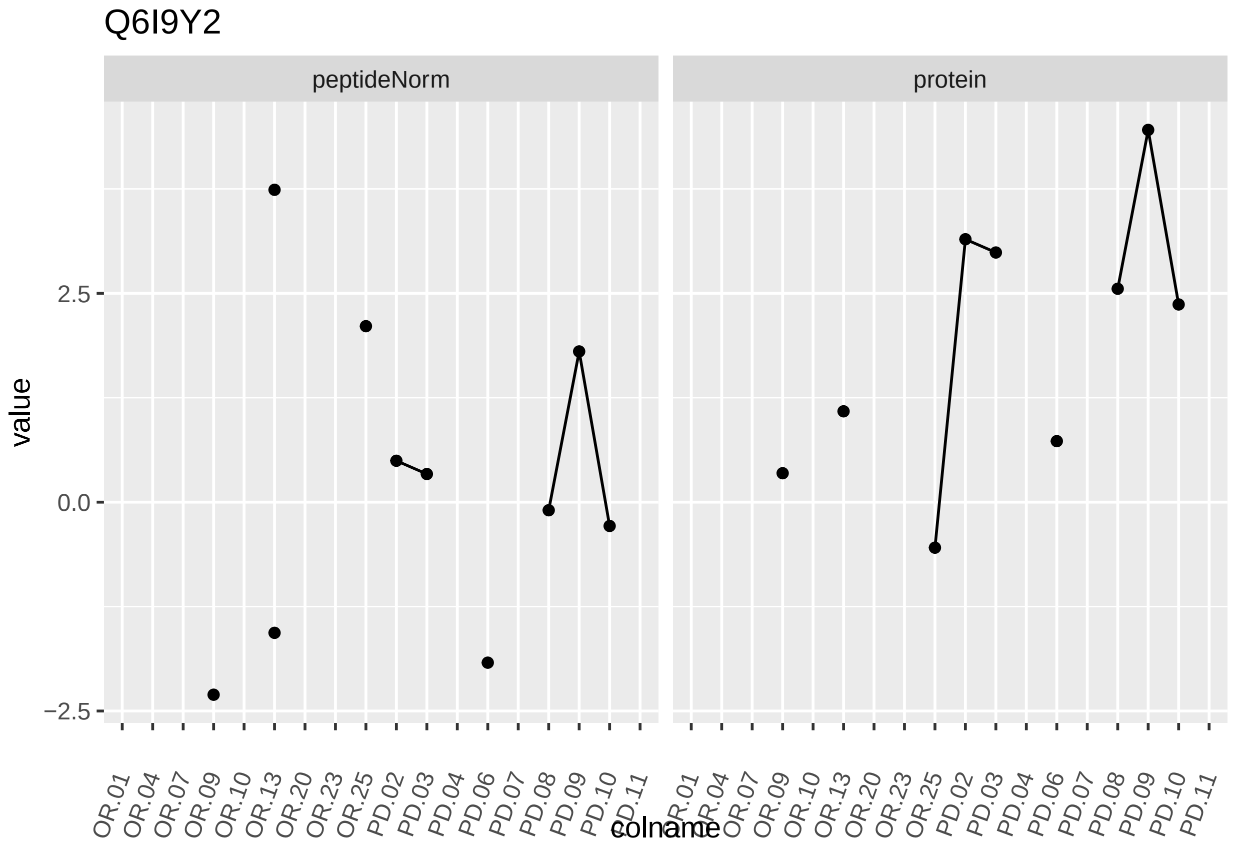
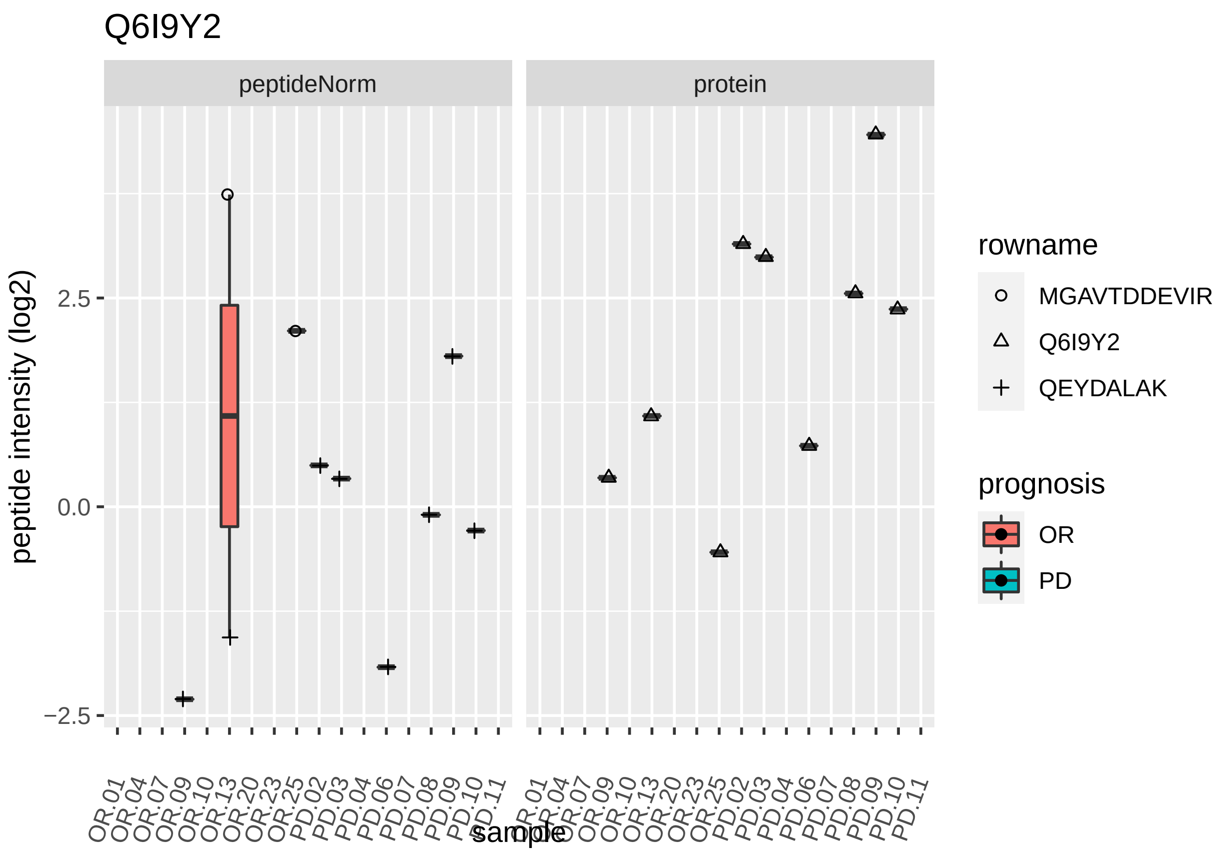
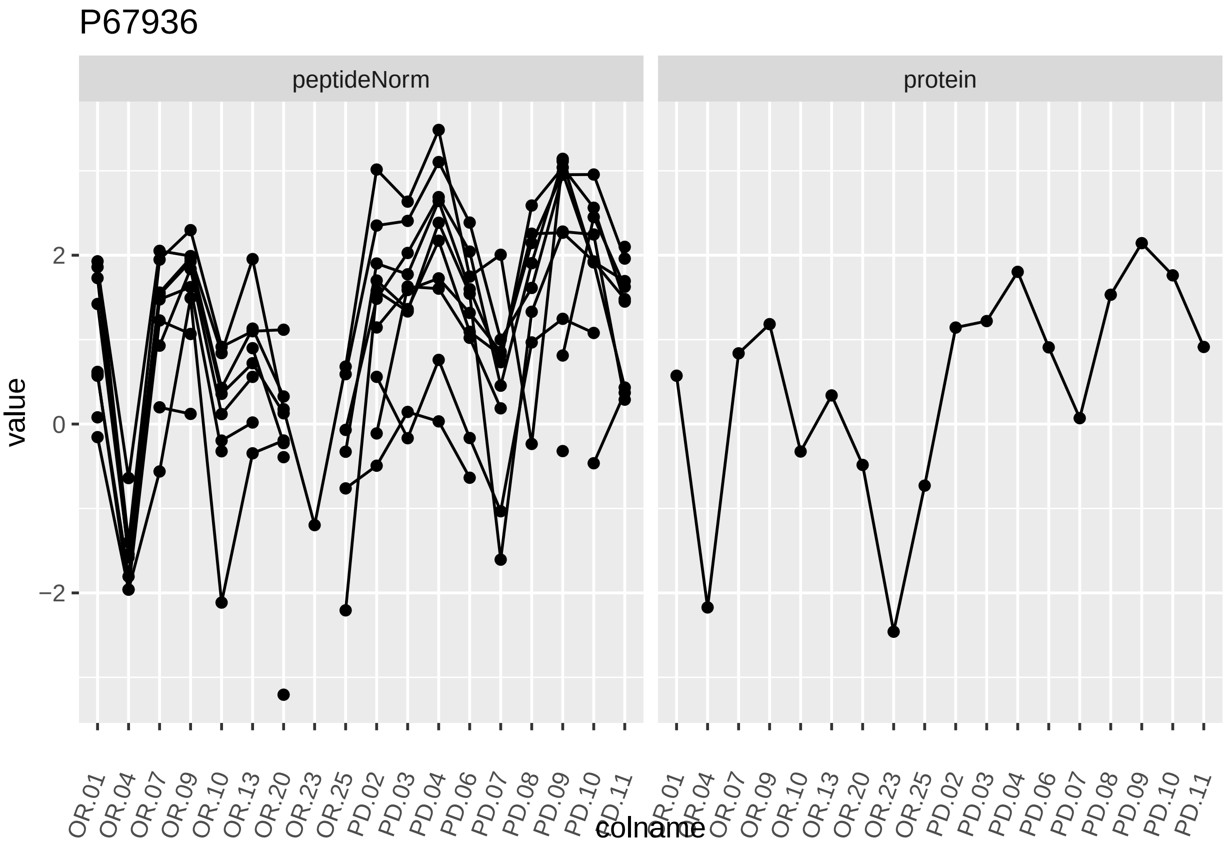
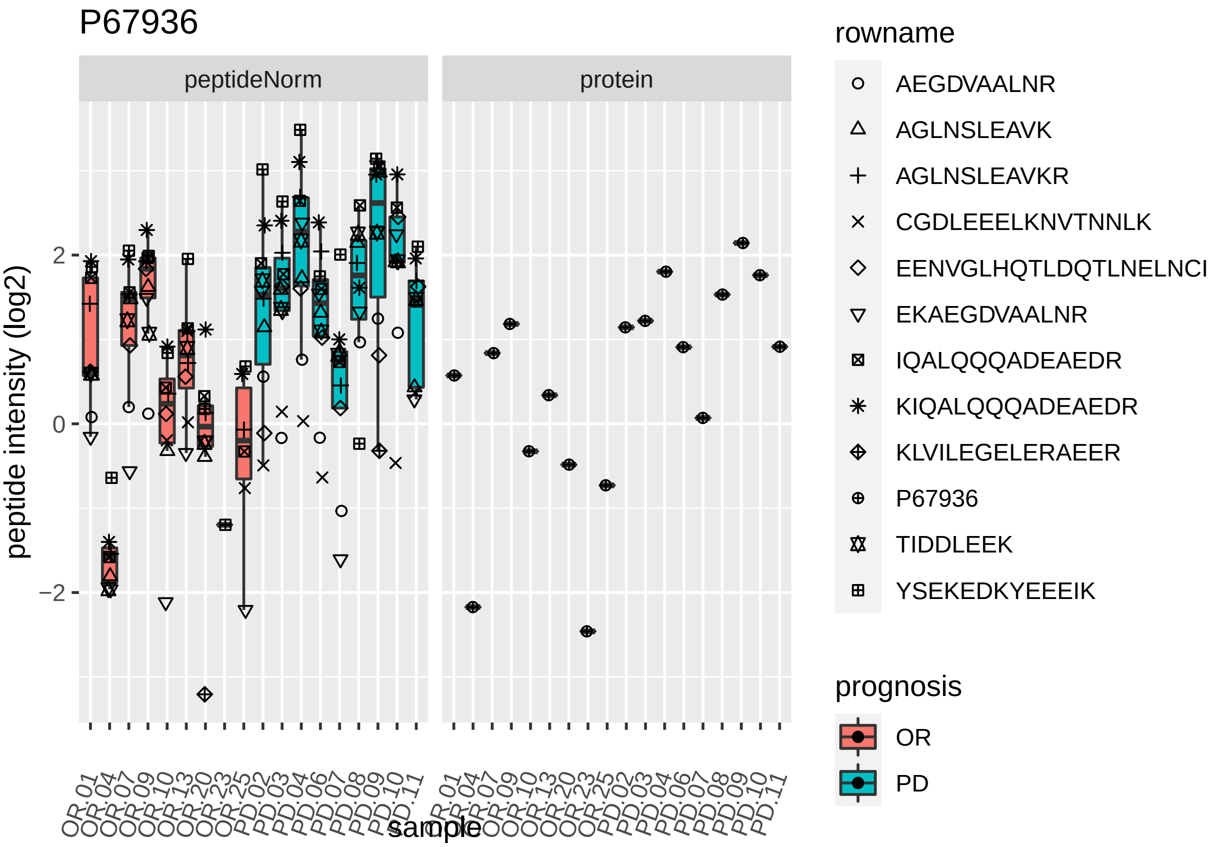
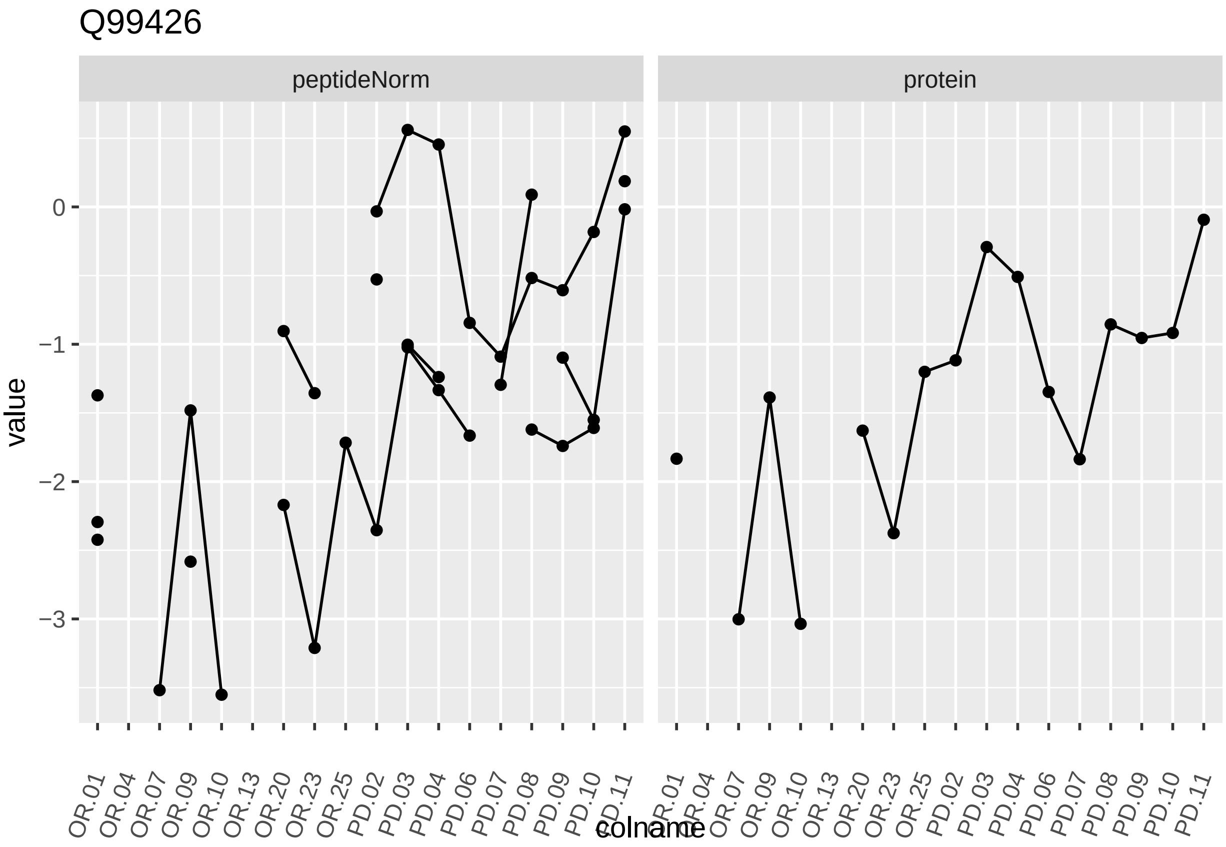
✳ SEGYFGMYR
prognosis
🟥 OR
🟦 PD

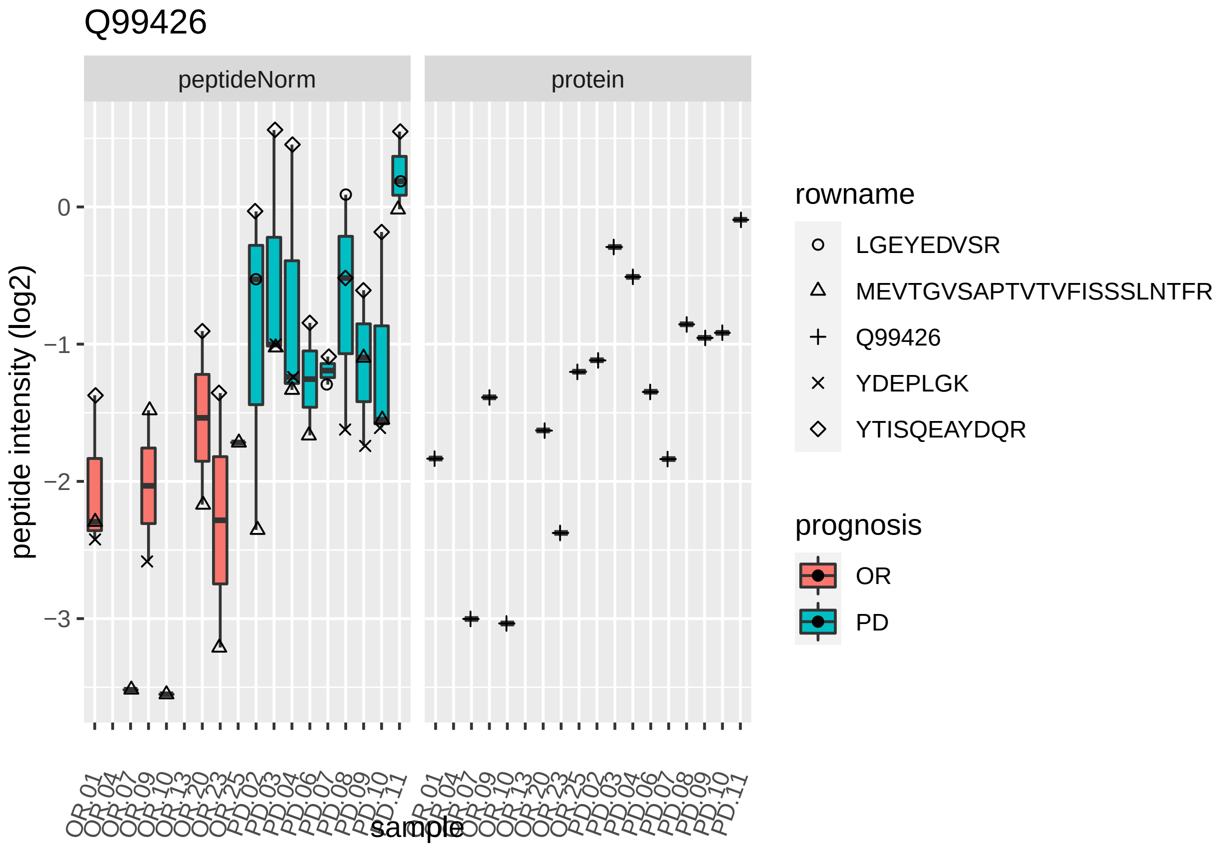

Q6I9Y2
peptideNorm
protein
value
2.5
0.0
−2.5
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

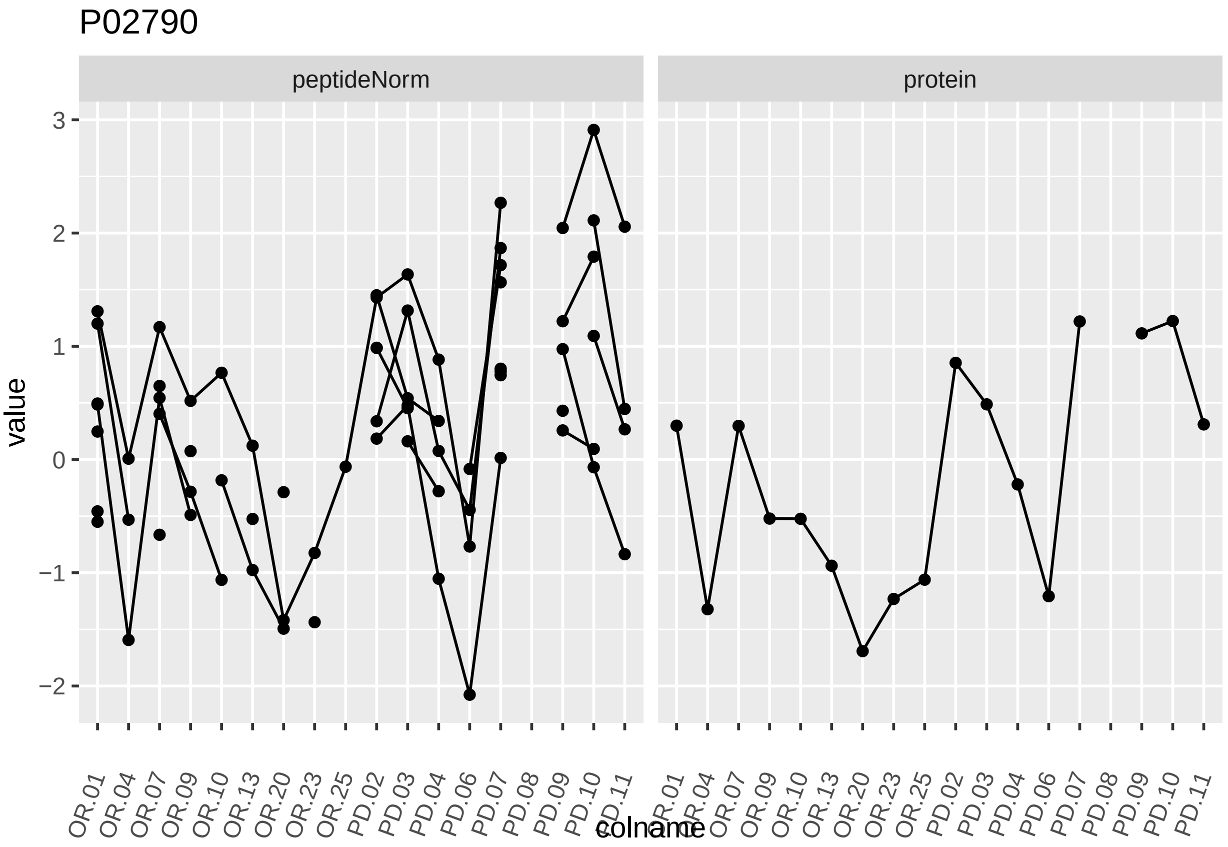

Q6I9Y2
peptideNorm
protein
peptide intensity (log2)
2.5
0.0
−2.5
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
sample
rowname
MGAVTDDEVIR
Q6I9Y2
QEYDALAK
prognosis
OR
PD

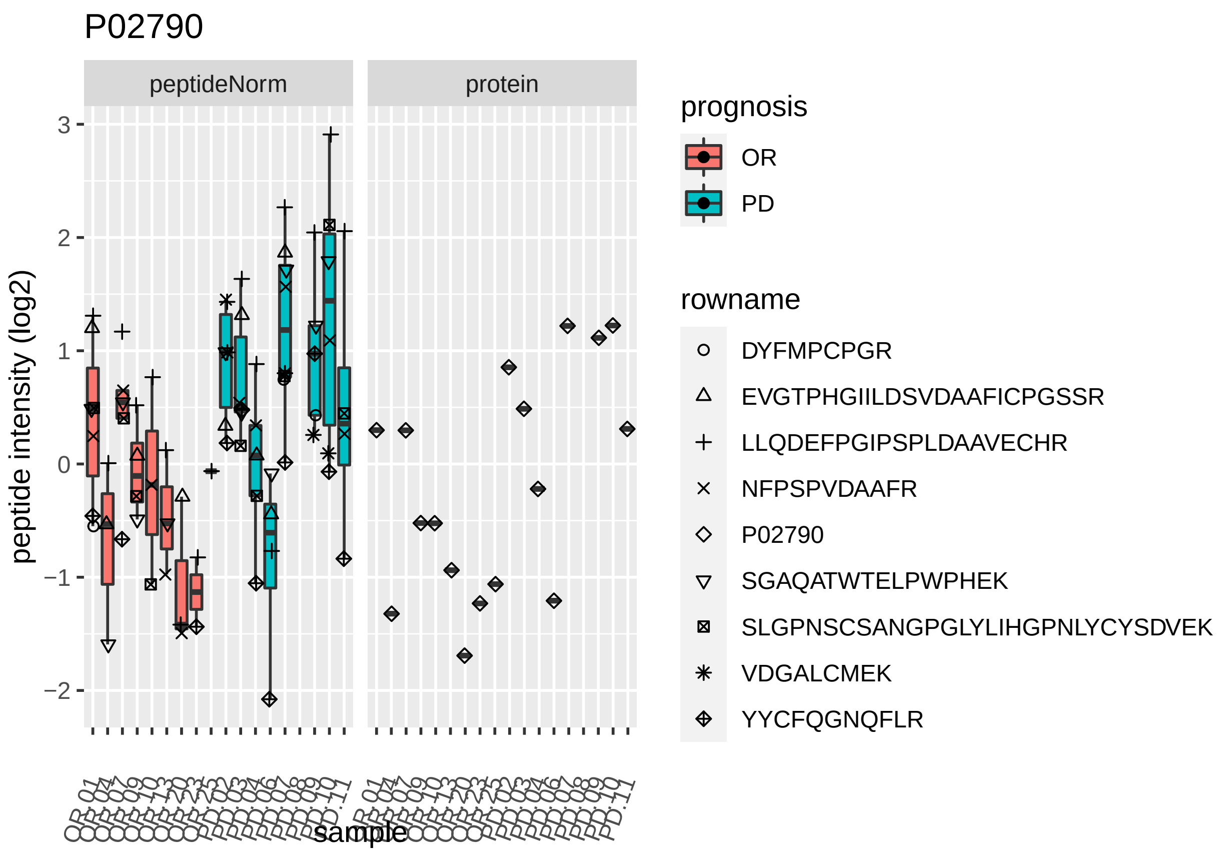

P67936
peptideNorm
protein
value
2
0
−2
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

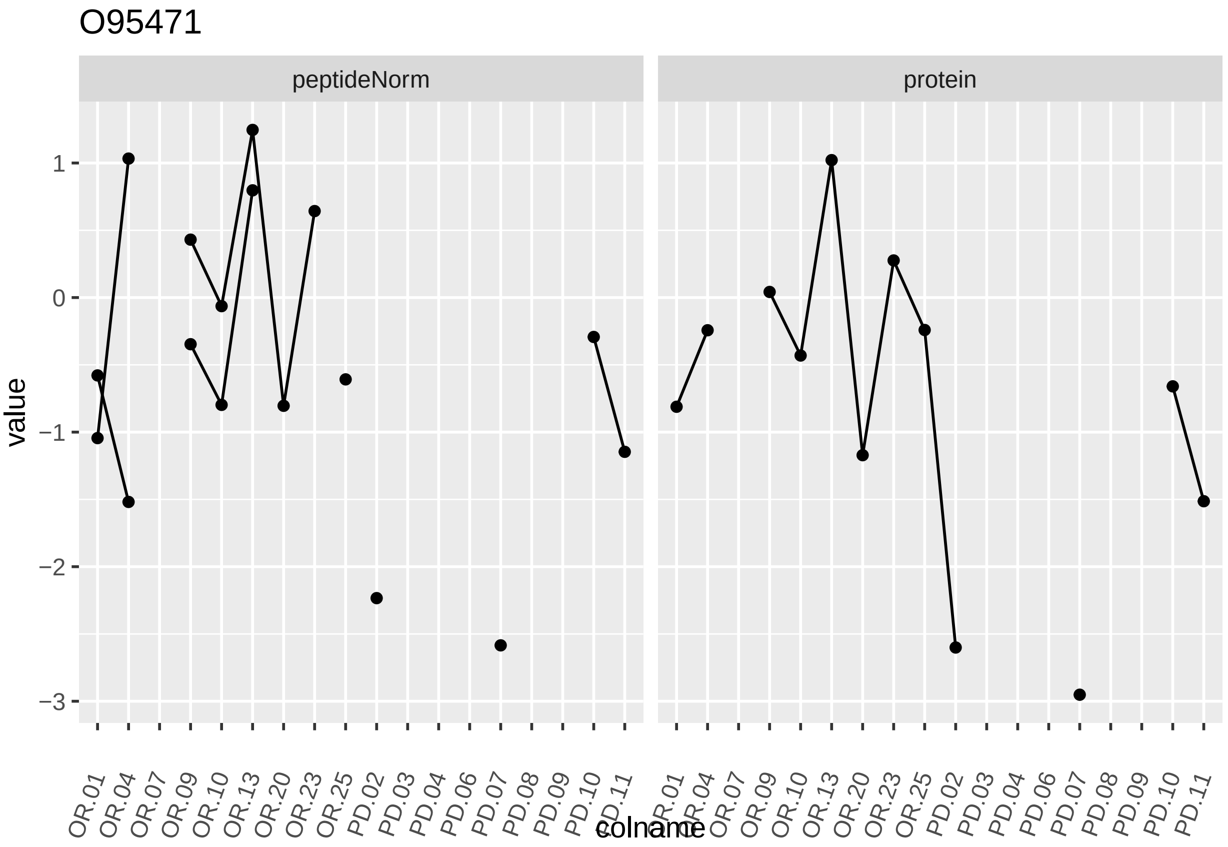

P67936
peptideNorm
protein
peptide intensity (log2)
2
0
−2
sample
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
rowname
AEGDVAALNR
AGLNSLEAVK
AGLNSLEAVKR
CGDLEEELKNVTNNLK
EENVGLHQTLDQTLNELNCI
EKAEGDVAALNR
IQALQQQADEAEDR
KIQALQQQADEAEDR
KLVILEGELERAEER
P67936
TIDDLEEK
YSEKEDKYEEEIK
prognosis
OR
PD


Q99426
peptideNorm
protein
value
0
−1
−2
−3
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

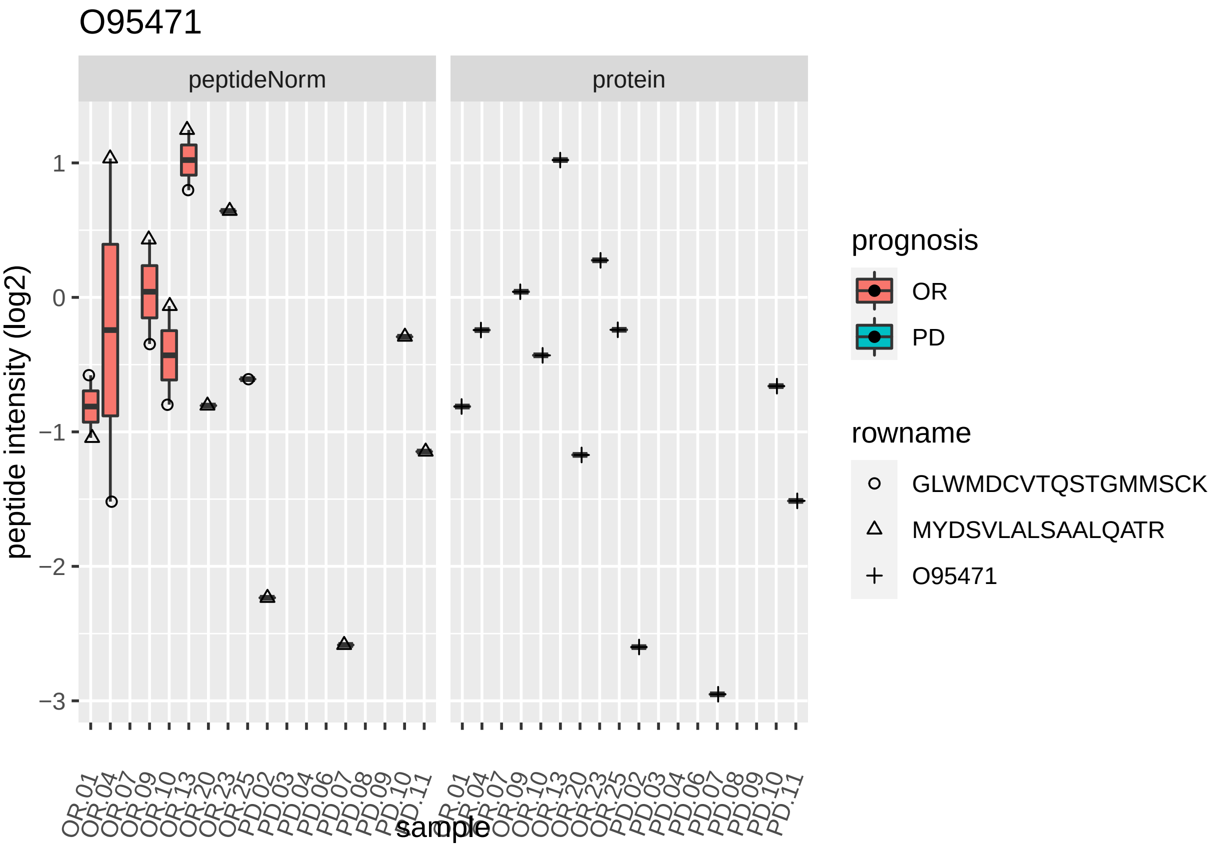

Q99426
peptideNorm
protein
peptide intensity (log2)
0
−1
−2
−3
sample
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
rowname
LGEYEDVSR
MEVTGVSAPTVTVFISSSLNTFR
Q99426
YDEPLGK
YTISQEAYDQR
prognosis
OR
PD

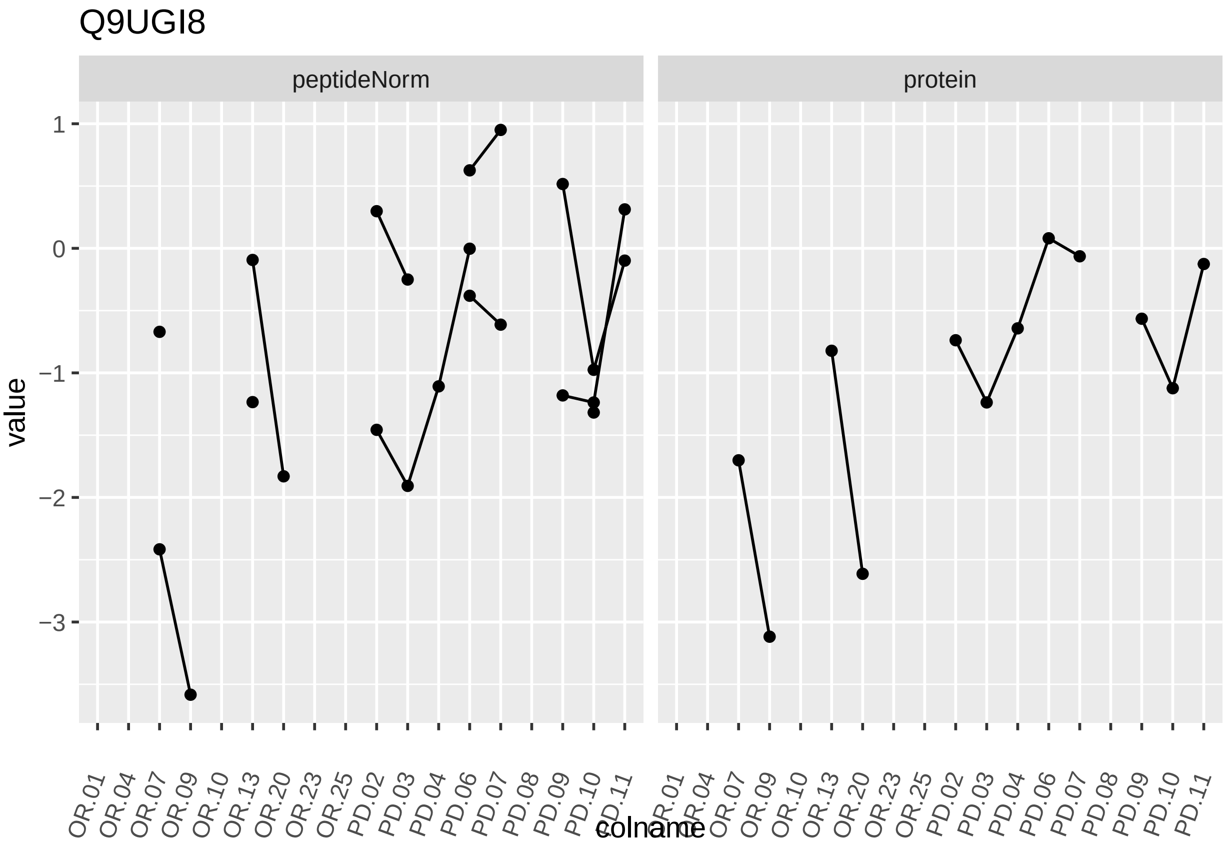

P02790
peptideNorm
protein
value
3
2
1
0
−1
−2
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

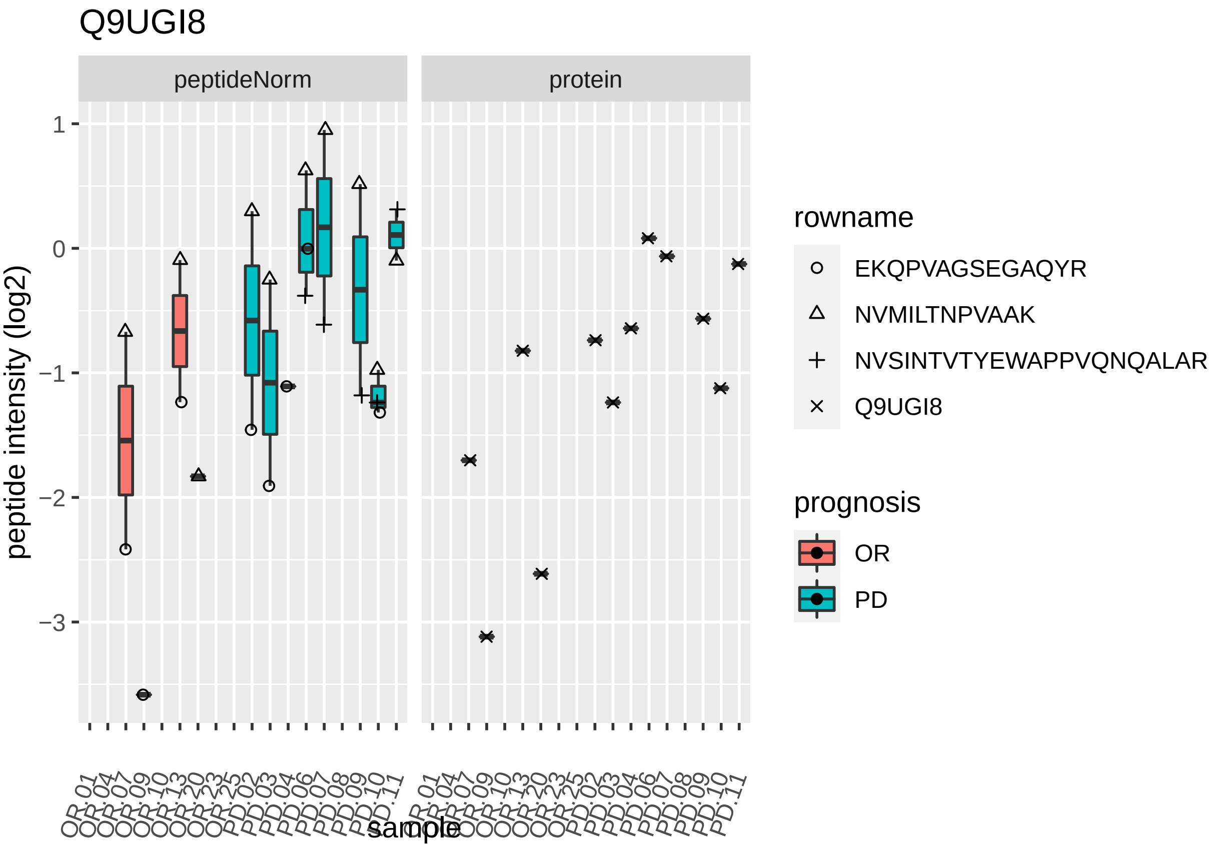

P02790
peptideNorm
protein
peptide intensity (log2)
3
2
1
0
−1
−2
OR.01
PD.11
sample
prognosis
OR
PD
rowname
DYFMPCPGR
EVGTPHGIILDSVDAAFICPGSSR
LLQDEFPGIPSPLDAAVECHR
NFPSPVDAAFR
P02790
SGAQATWTELPWPHEK
SLGPNSCSANGPGLYLIHGPNLYCYSDVEK
VDGALCMEK
YYCFQGNQFLR

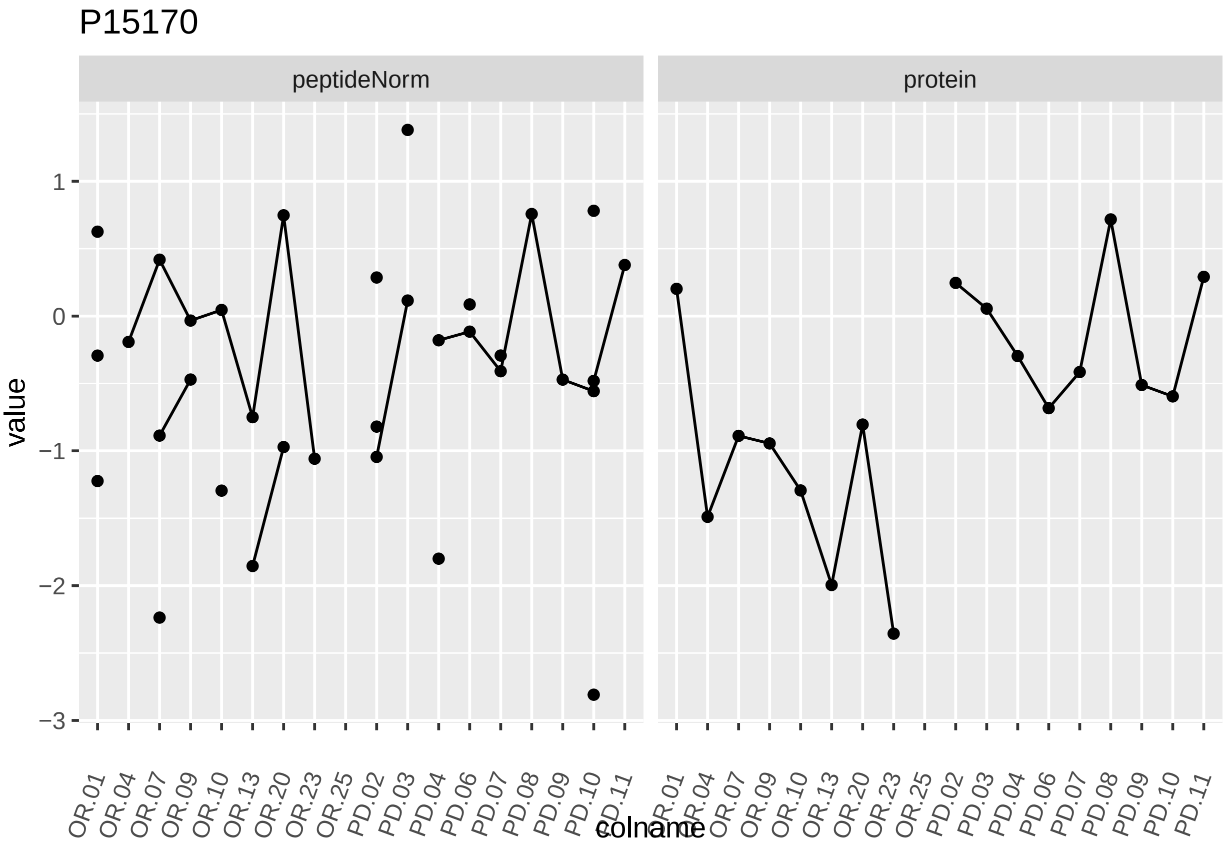


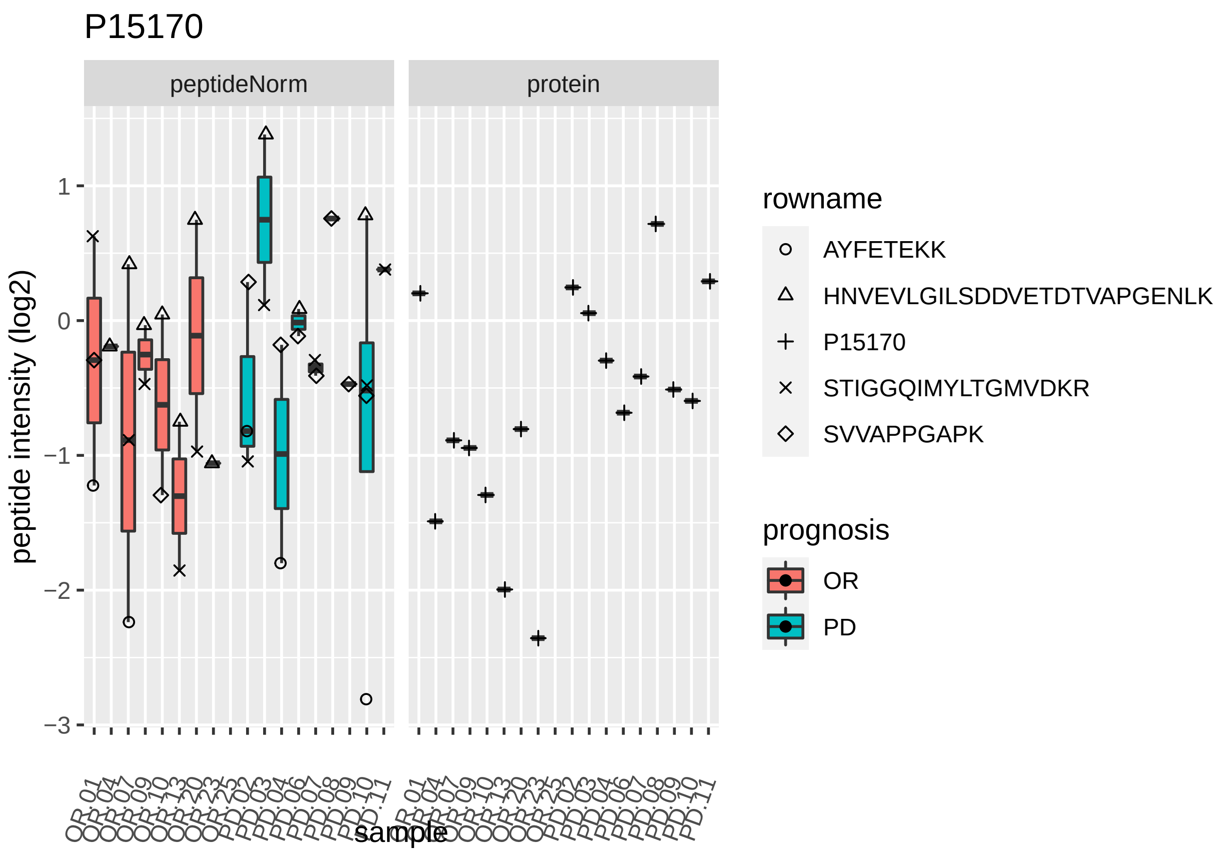
O95471
peptideNorm
protein
value
1
0
−1
−2
−3
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

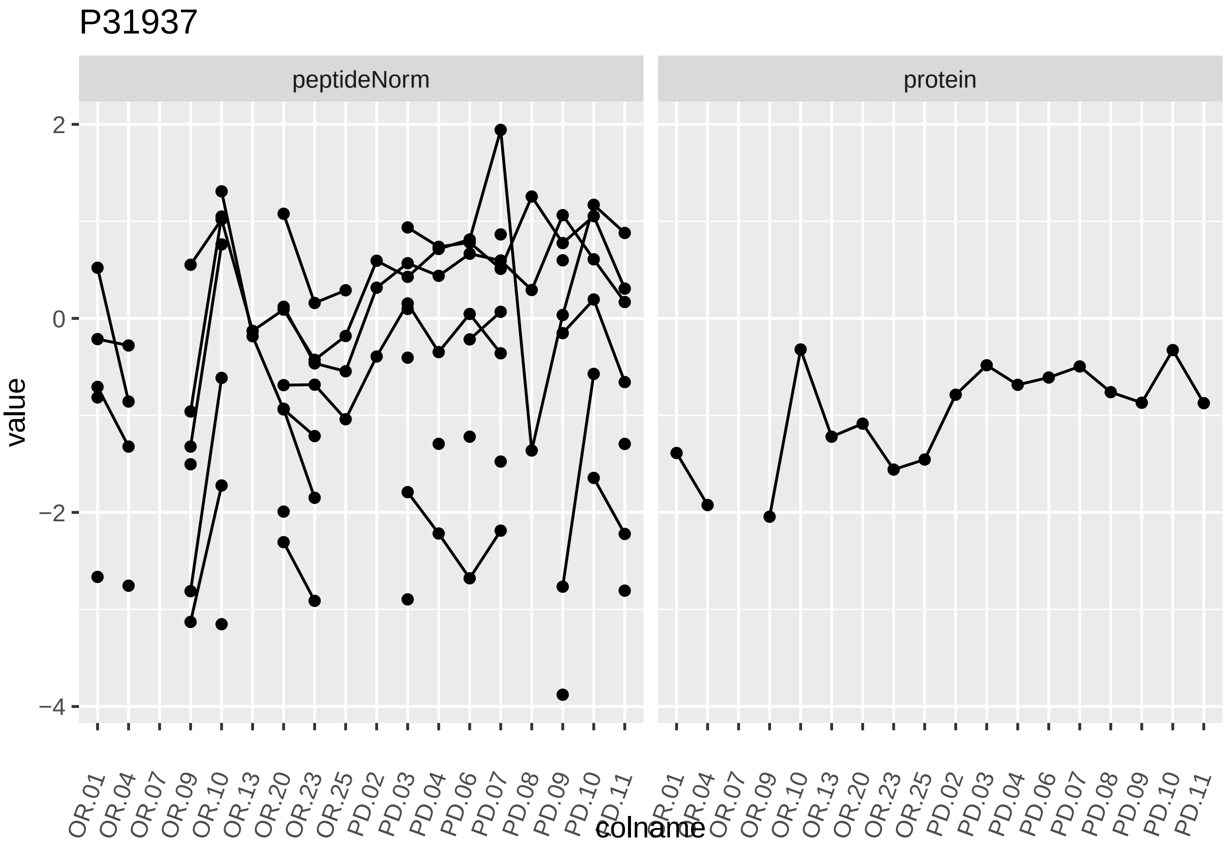

O95471
peptideNorm
protein
peptide intensity (log2)
1
0
−1
−2
−3
sample
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
prognosis
OR
PD
rowname
○ GLWMDCVTQSTGMMSCK
△ MYDSVLALSAALQATR
+ O95471

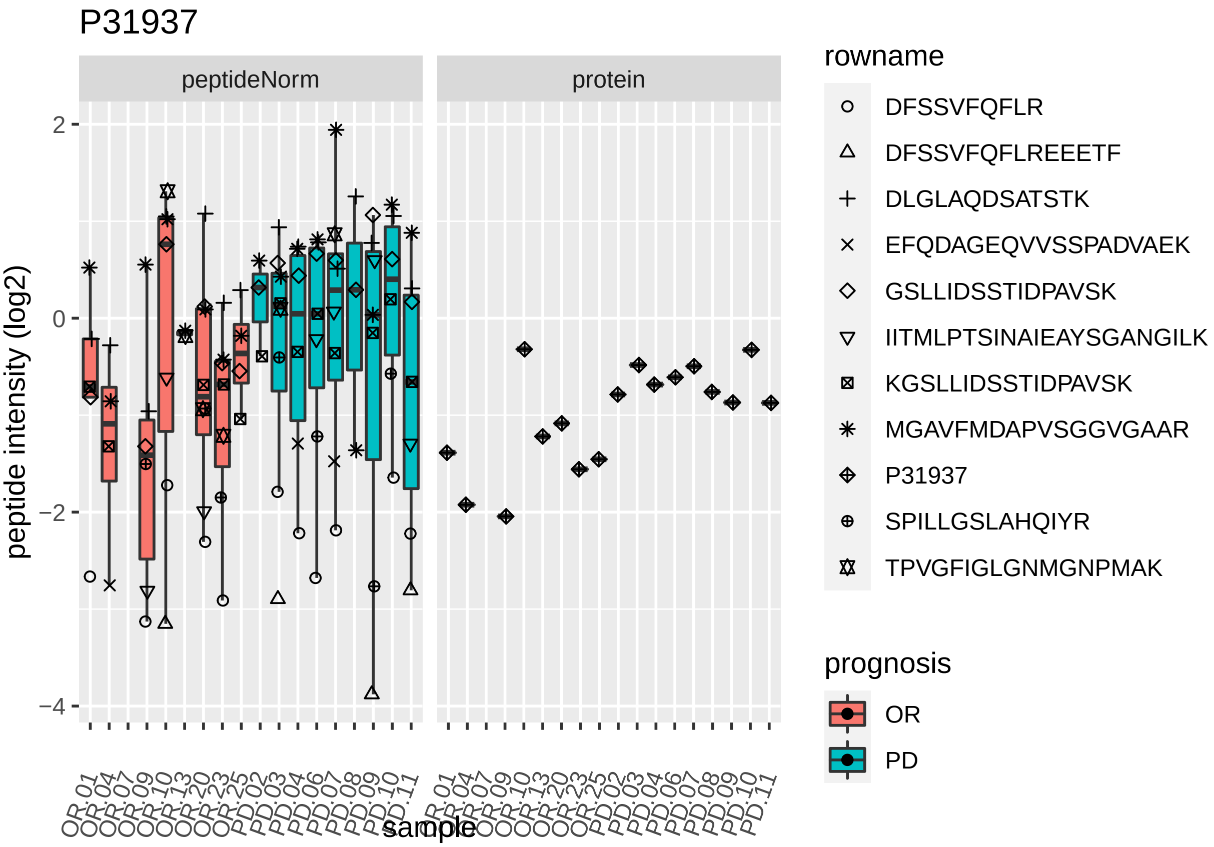

Q9UGI8
peptideNorm
protein
value
1
0
−1
−2
−3
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

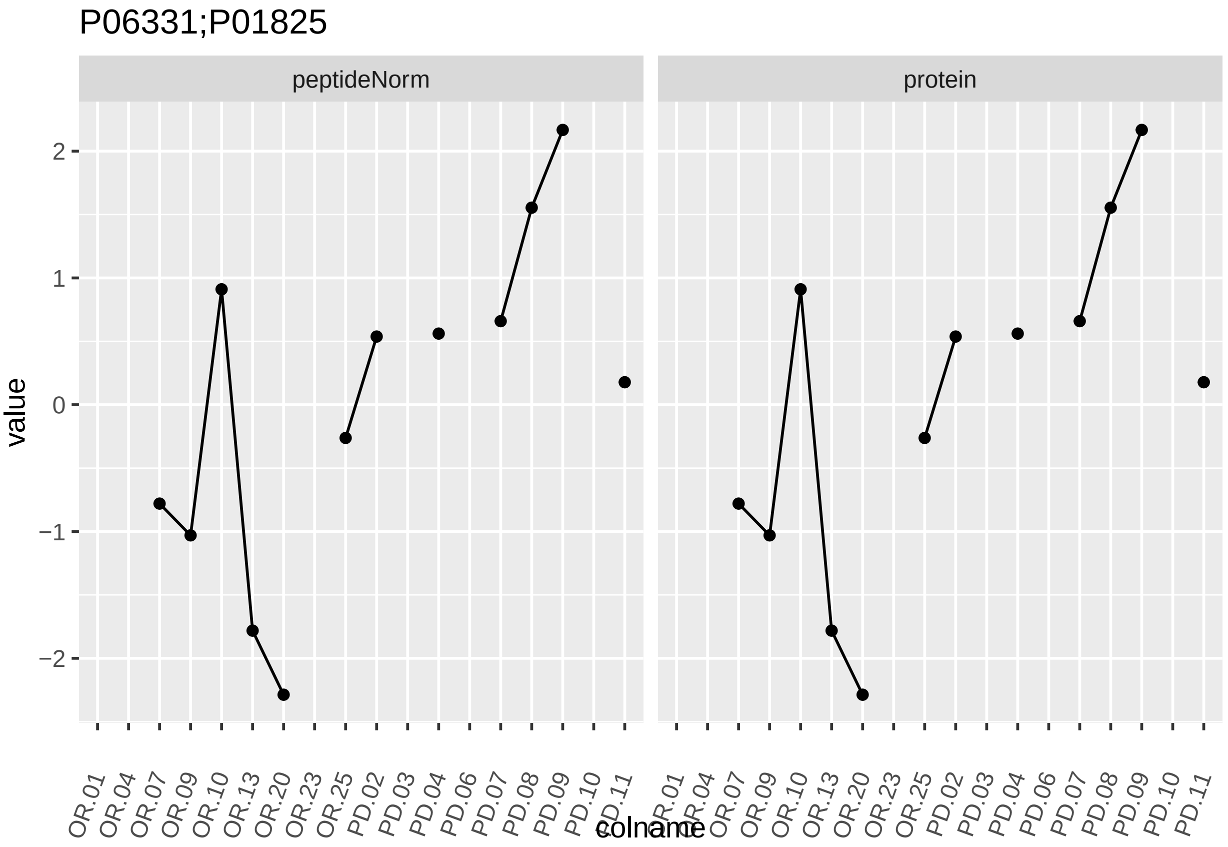

Q9UGI8
peptideNorm
protein
peptide intensity (log2)
1
0
−1
−2
−3
sample
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
rowname
○ EKQPVAGSEGAQYR
△ NVMILTNPVAAK
+ NVSINTVTYEWAPPVQNQALAR
× Q9UGI8
prognosis
OR
PD

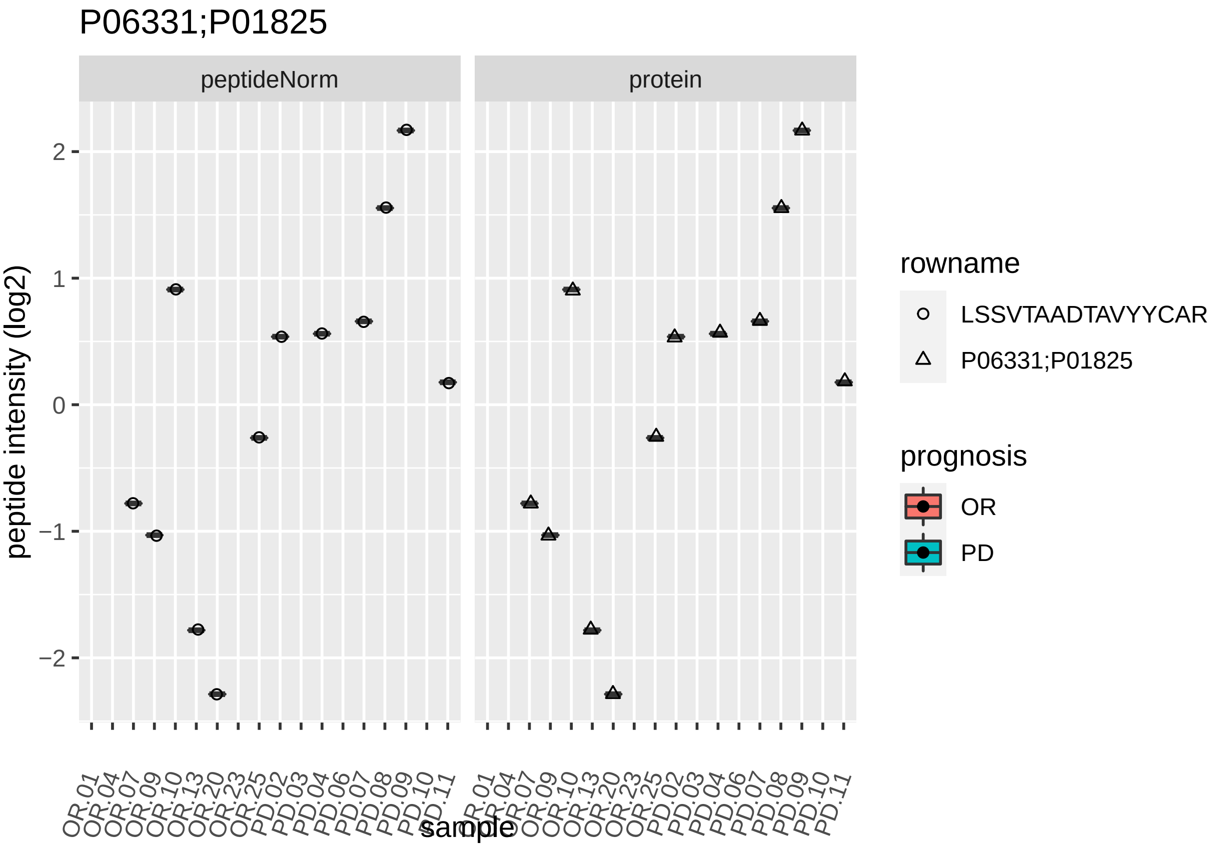

P15170
peptideNorm
protein
value
1
0
−1
−2
−3
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

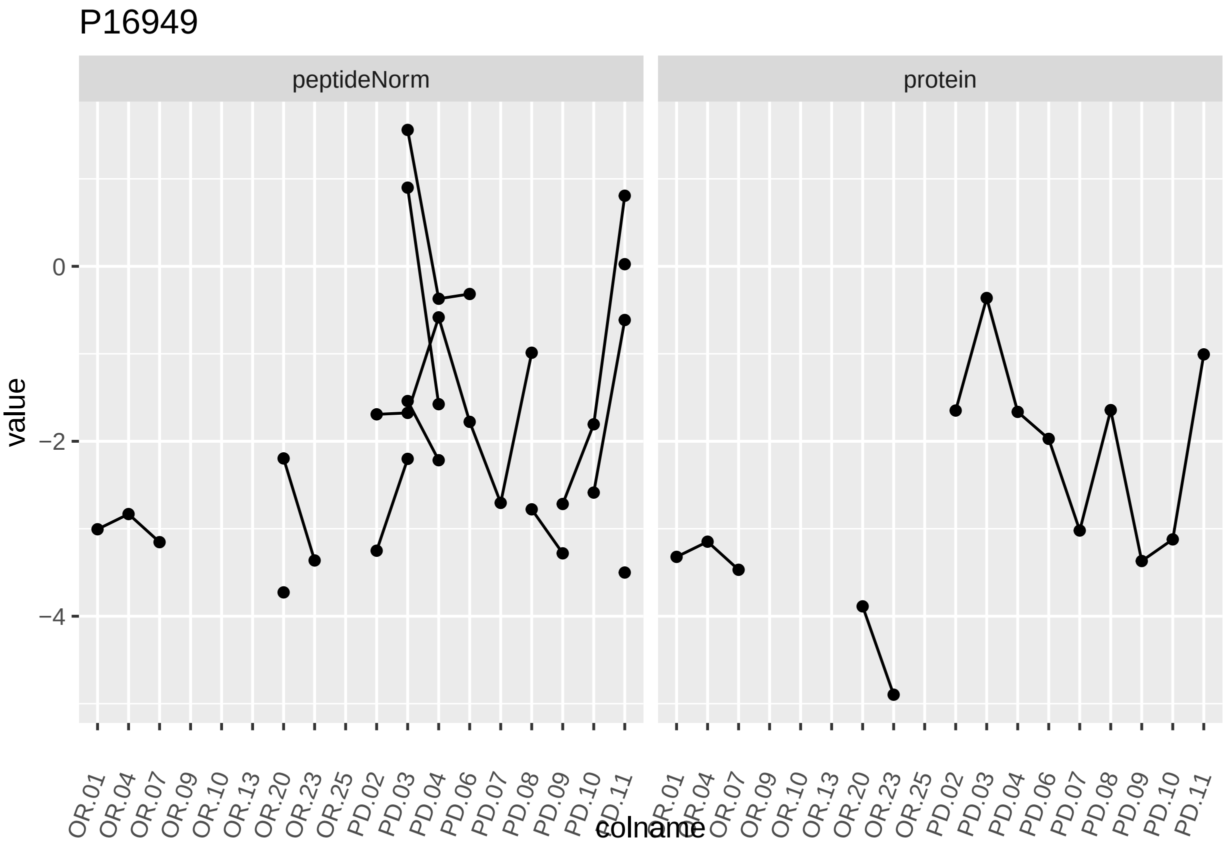

P15170
peptideNorm
protein
peptide intensity (log2)
1
0
−1
−2
−3
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
sample
rowname
AYFETEKK
HNVEVLGILSDDVETDTVAPGENLK
P15170
STIGGQIMYLTGMVDKR
SVVAPPGAPK
prognosis
OR
PD

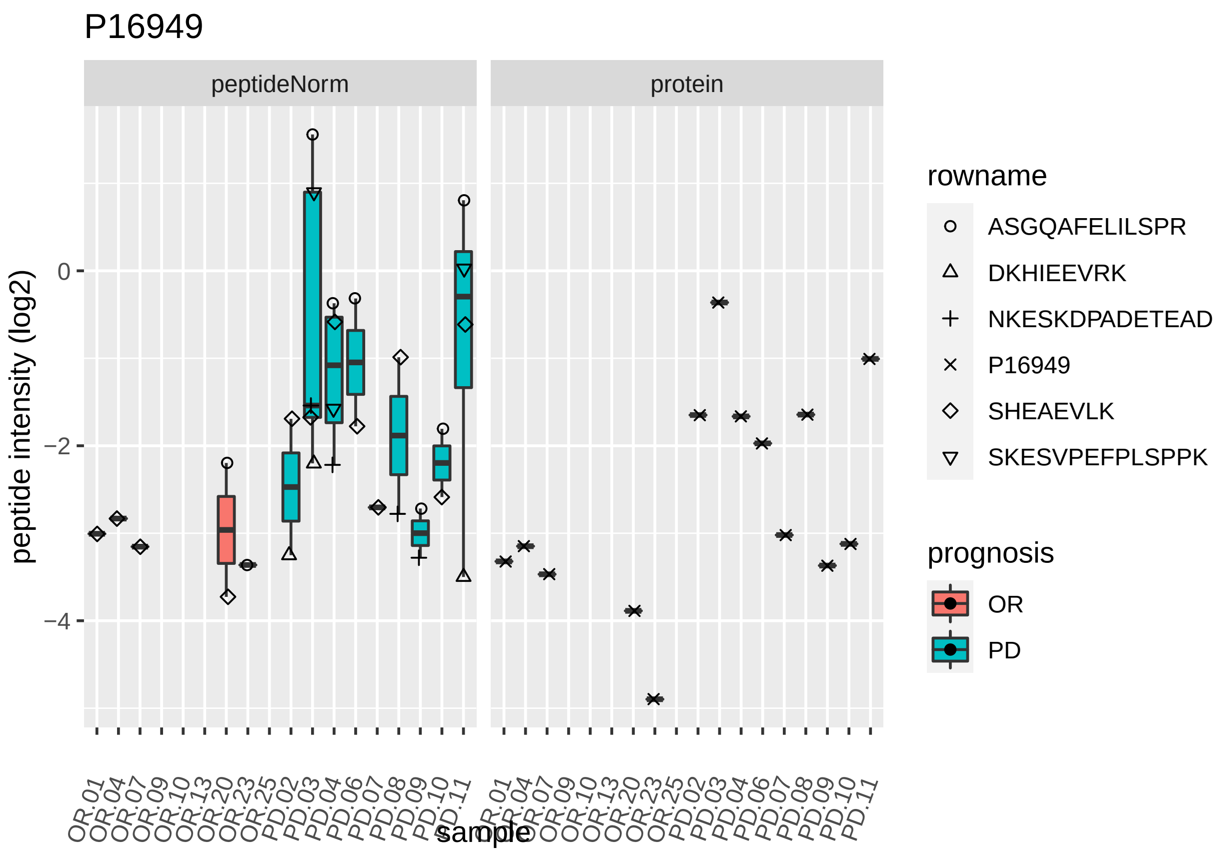

P31937
peptideNorm
protein
value
colname
2
0
−2
−4
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

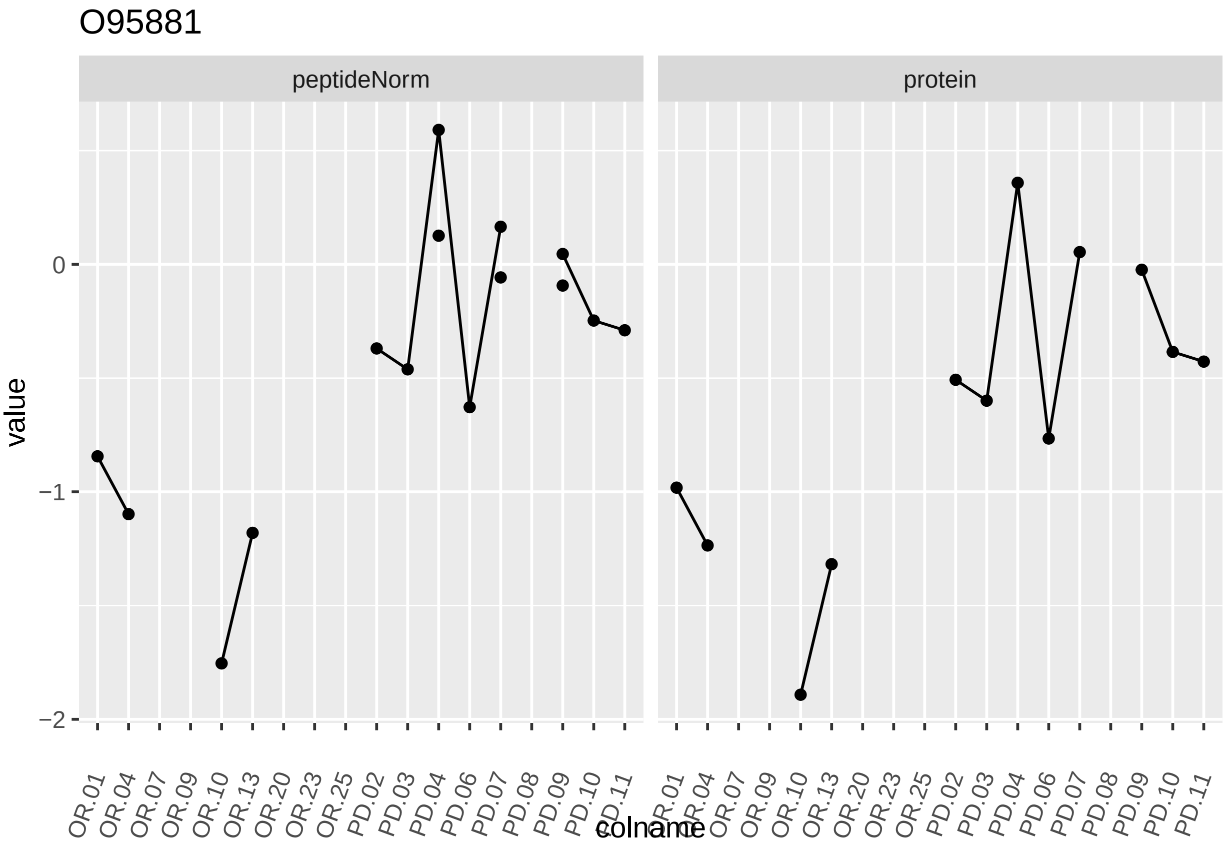

P31937
peptideNorm
protein
peptide intensity (log2)
2
0
−2
−4
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
sample
rowname
DFSSVFQFLR
DFSSVFQFLREEETF
DLGLAQDSATSTK
EFQDAGEQVVSSPADVAEK
GSLLIDSSTIDPAVSK
IITMLPTSINAIEAYSGANGILK
KGSLLIDSSTIDPAVSK
MGAVFMDAPVSGGVGAAR
P31937
SPILLGSLAHQIYR
TPVGFIGLGNMGNPMAK
prognosis
OR
PD

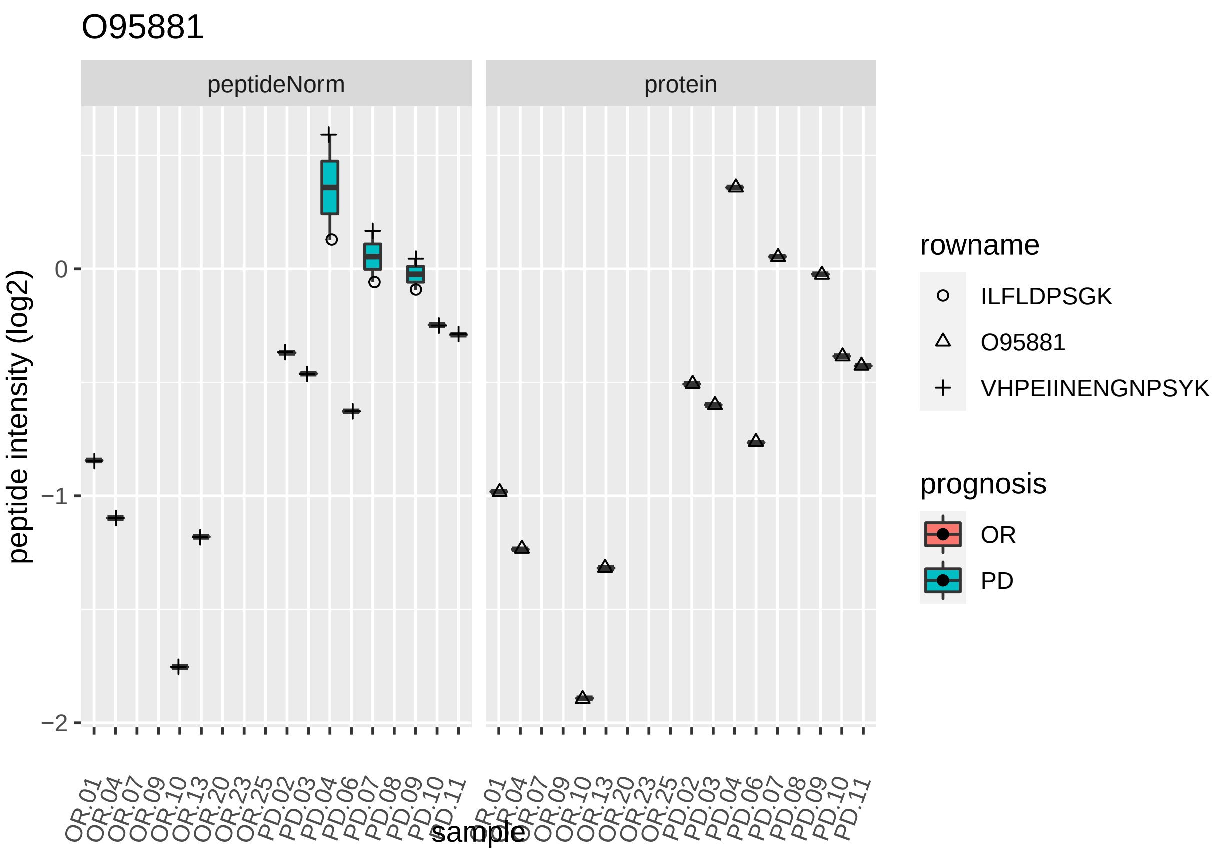

P06331;P01825
peptideNorm
protein
value
2
1
0
−1
−2
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

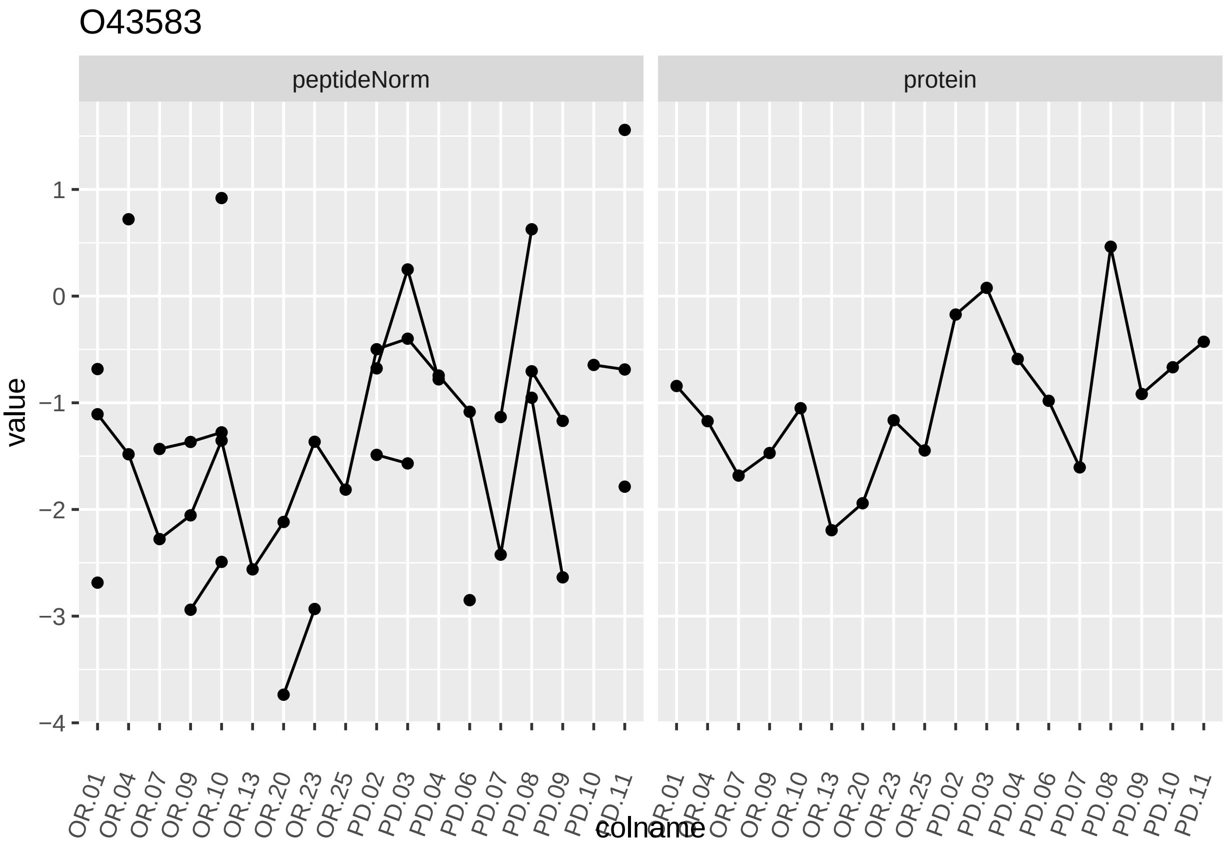

P06331;P01825
peptideNorm
protein
peptide intensity (log2)
2
1
0
−1
−2
sample
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
rowname
○ LSSVTAADTAVYYCAR
△ P06331;P01825
prognosis
OR
PD

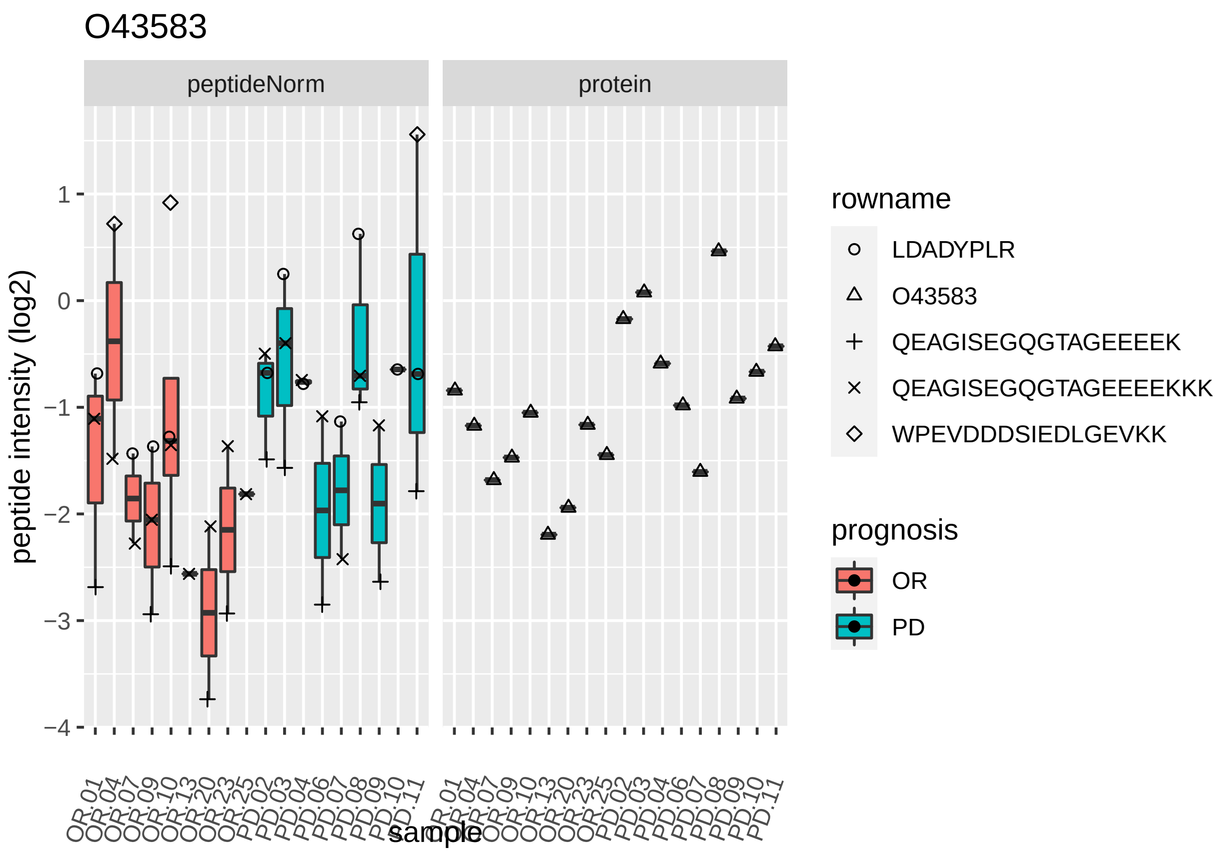

P16949
peptideNorm
protein
value
0
−2
−4
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

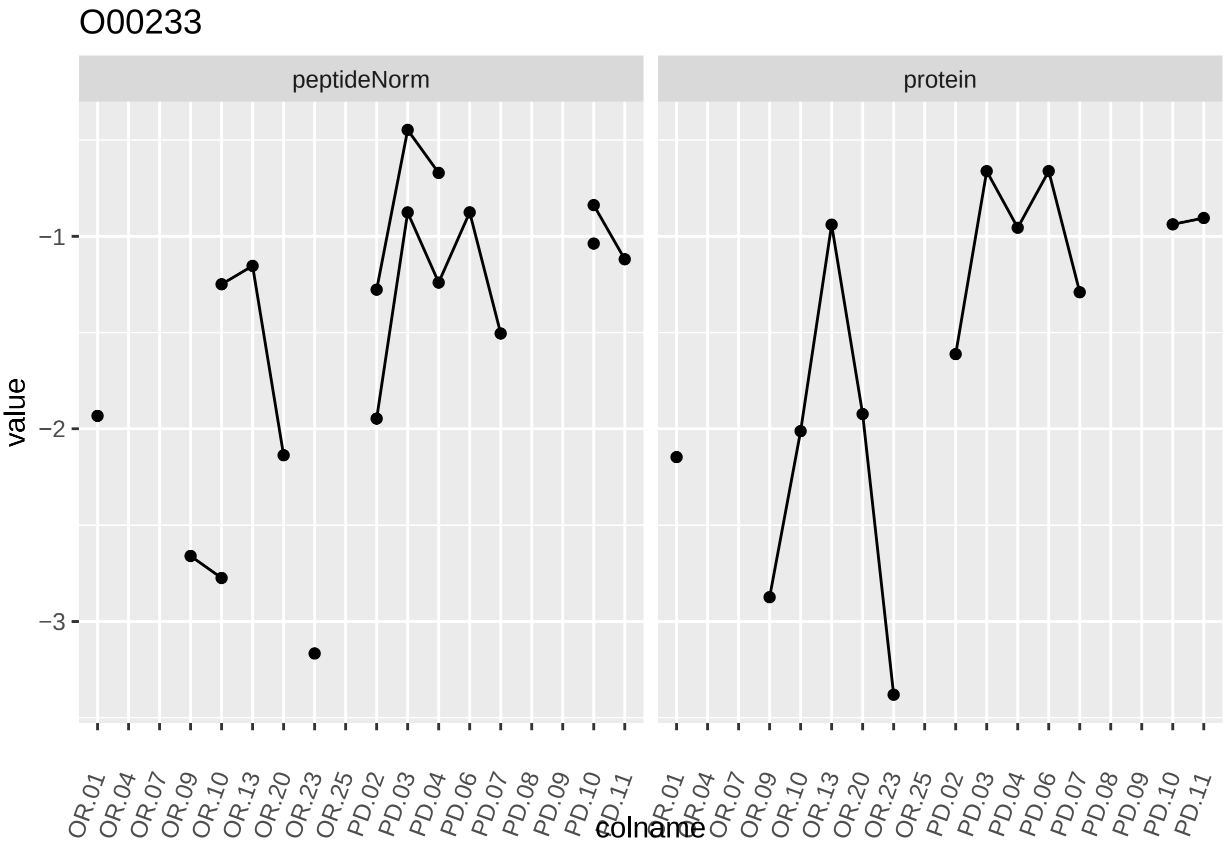

P16949
peptideNorm
protein
peptide intensity (log2)
0
−2
−4
sample
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
rowname
○ ASGQAFELILSPR
△ DKHIEEVRK
+ NKESKDPADETEAD
× P16949
◇ SHEAEVLK
▽ SKESVPEFPLSPPK
prognosis
OR
PD

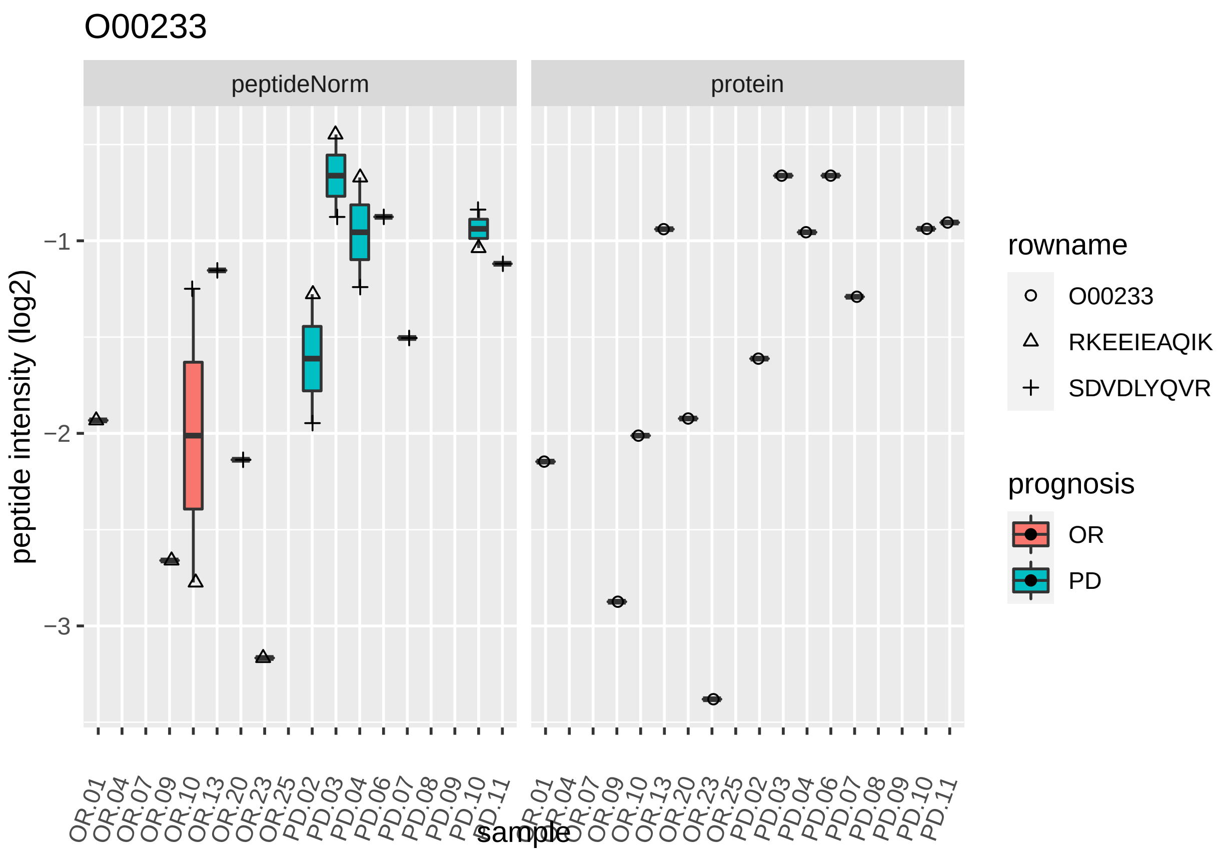

O95881
peptideNorm
protein
value
colname
0
−1
−2
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

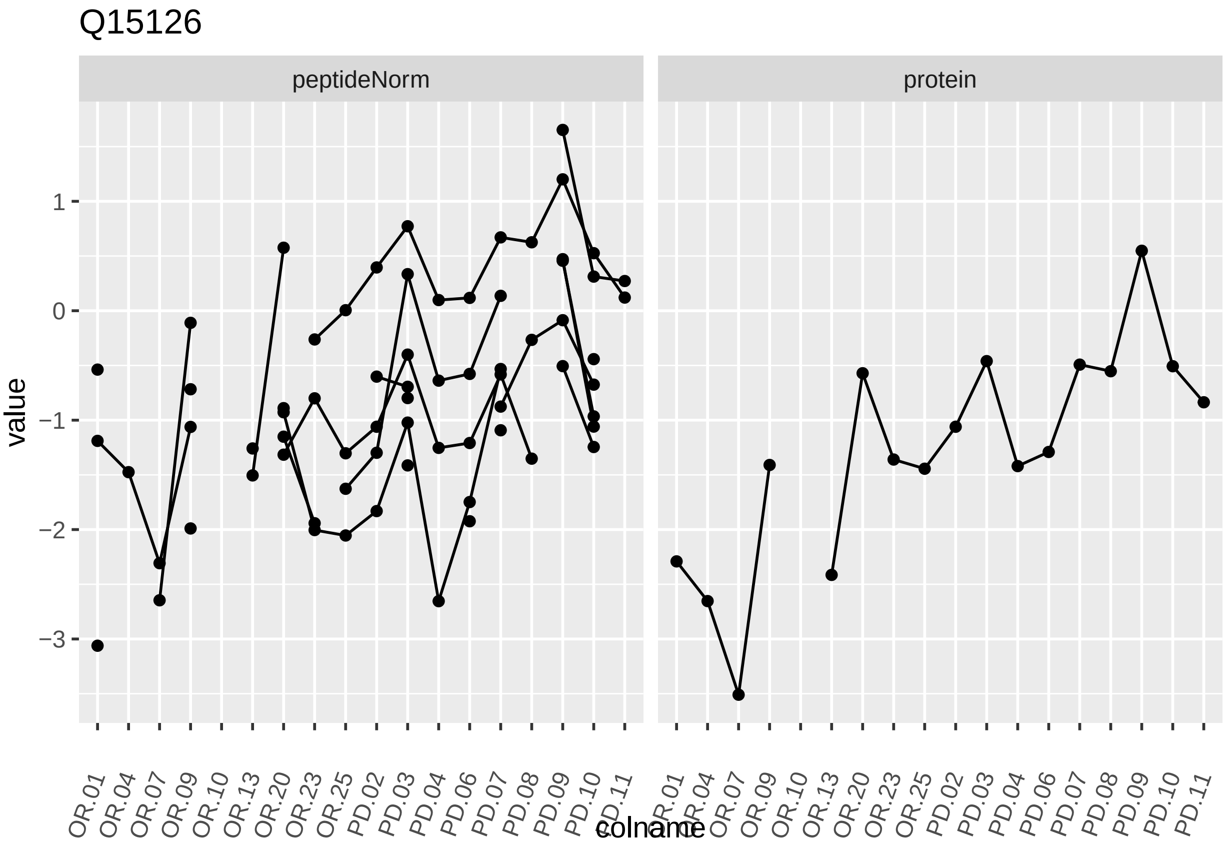

O95881
peptideNorm
protein
peptide intensity (log2)
0
−1
−2
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
sample
rowname
ILFLDPSGK
O95881
VHPEIINENGNPSYK
prognosis
OR
PD

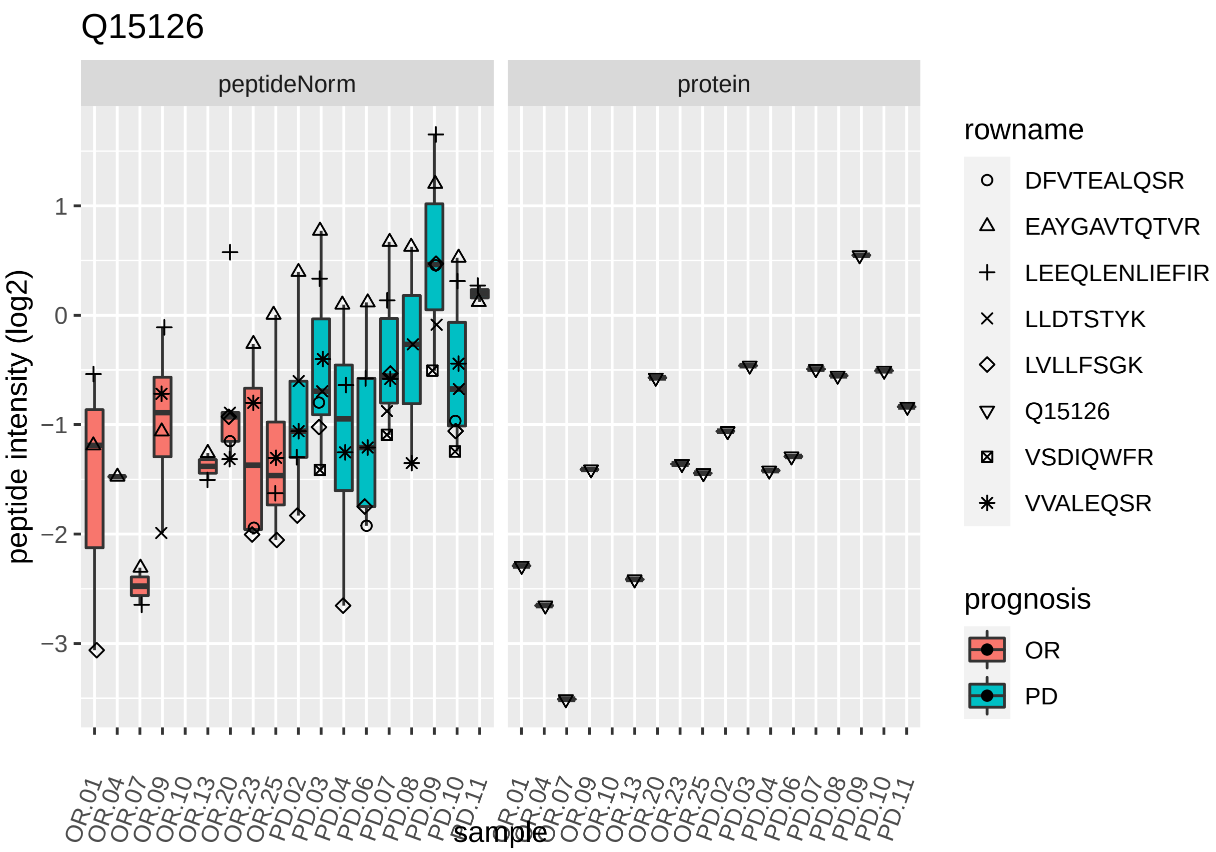

O43583
peptideNorm
protein
value
1
0
−1
−2
−3
−4
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

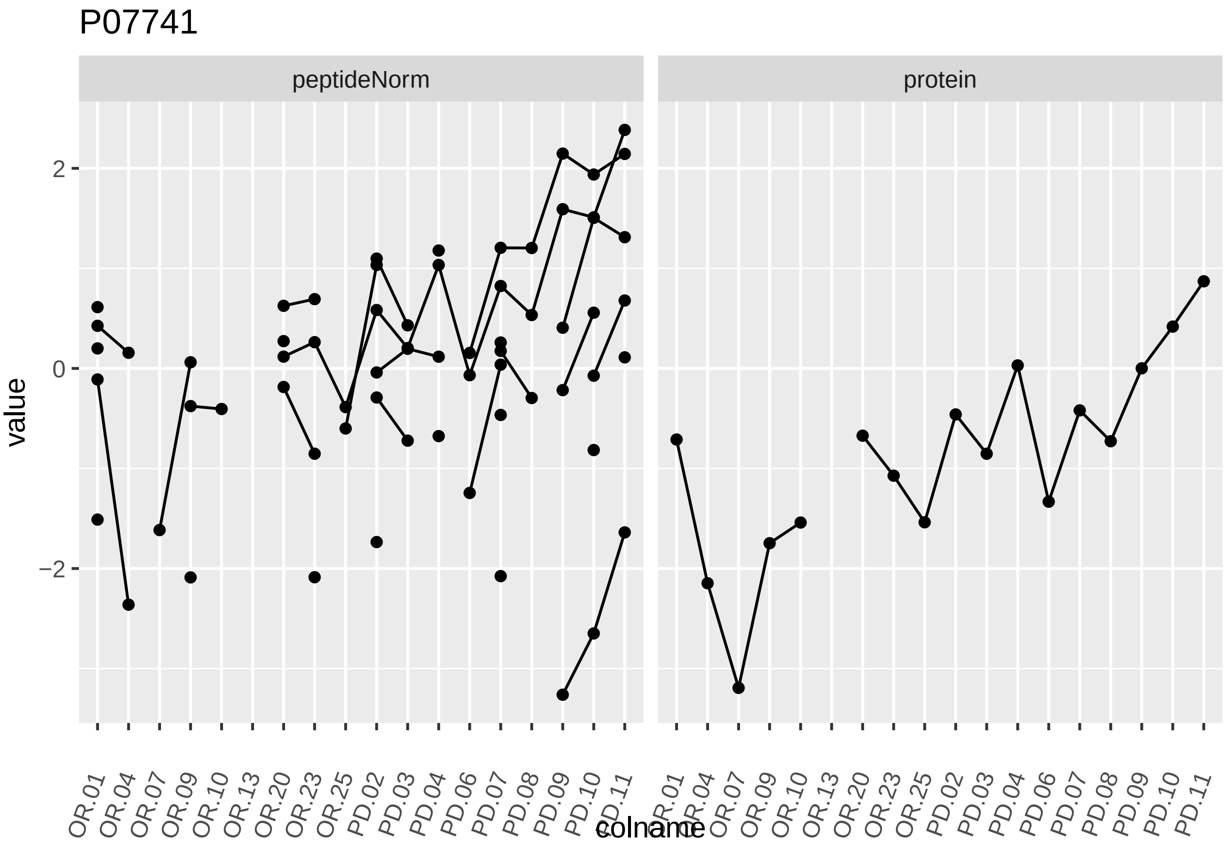

O43583
peptideNorm
protein
peptide intensity (log2)
1
0
−1
−2
−3
−4
sample
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
rowname
○ LDADYPLR
△ O43583
+ QEAGISEGQGTAGEEEEK
× QEAGISEGQGTAGEEEEKKK
◇ WPEVDDDSIEDLGEVKK
prognosis
🟥 OR
🟦 PD

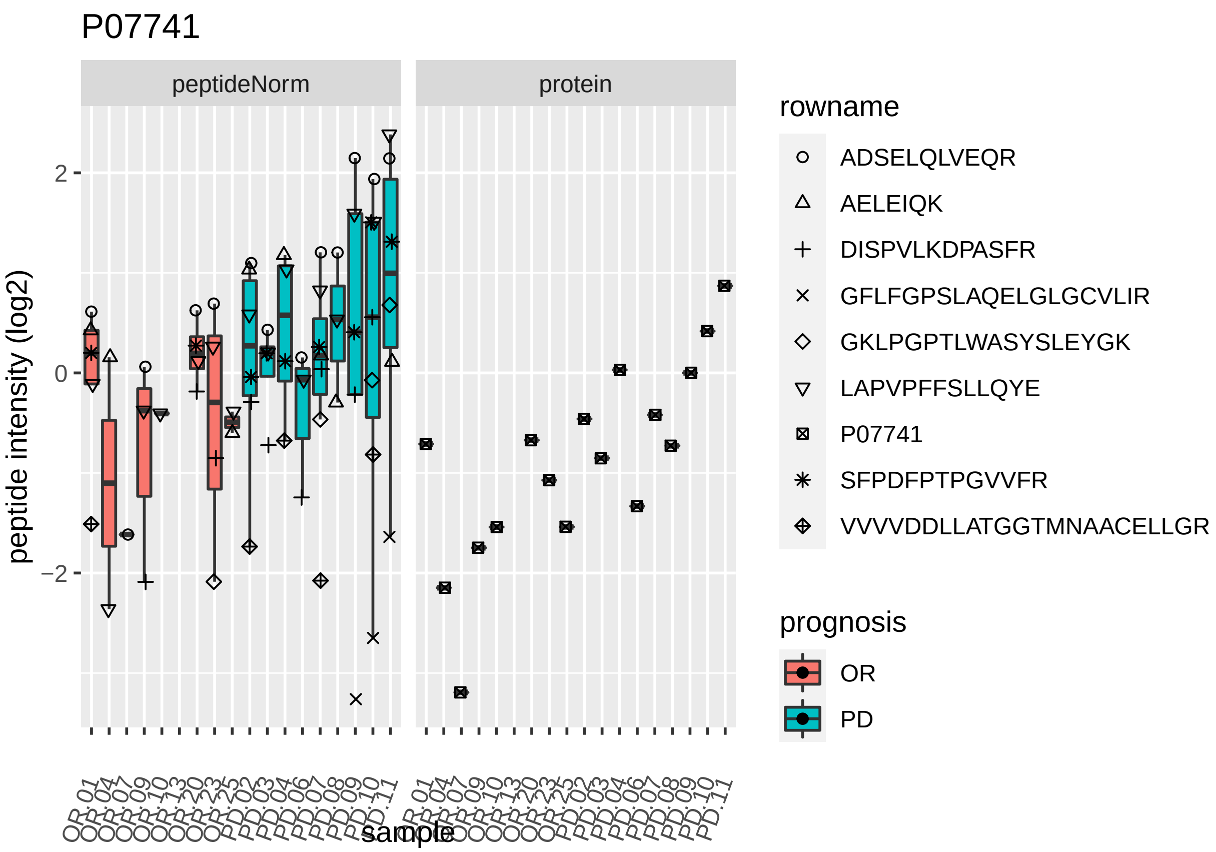

O00233
peptideNorm
protein
value
−1
−2
−3
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11


O00233
peptideNorm
protein
peptide intensity (log2)
−1
−2
−3
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
sample
rowname
○ O00233
△ RKEEIEAQIK
+ SDVDLYQVR
prognosis
OR
PD

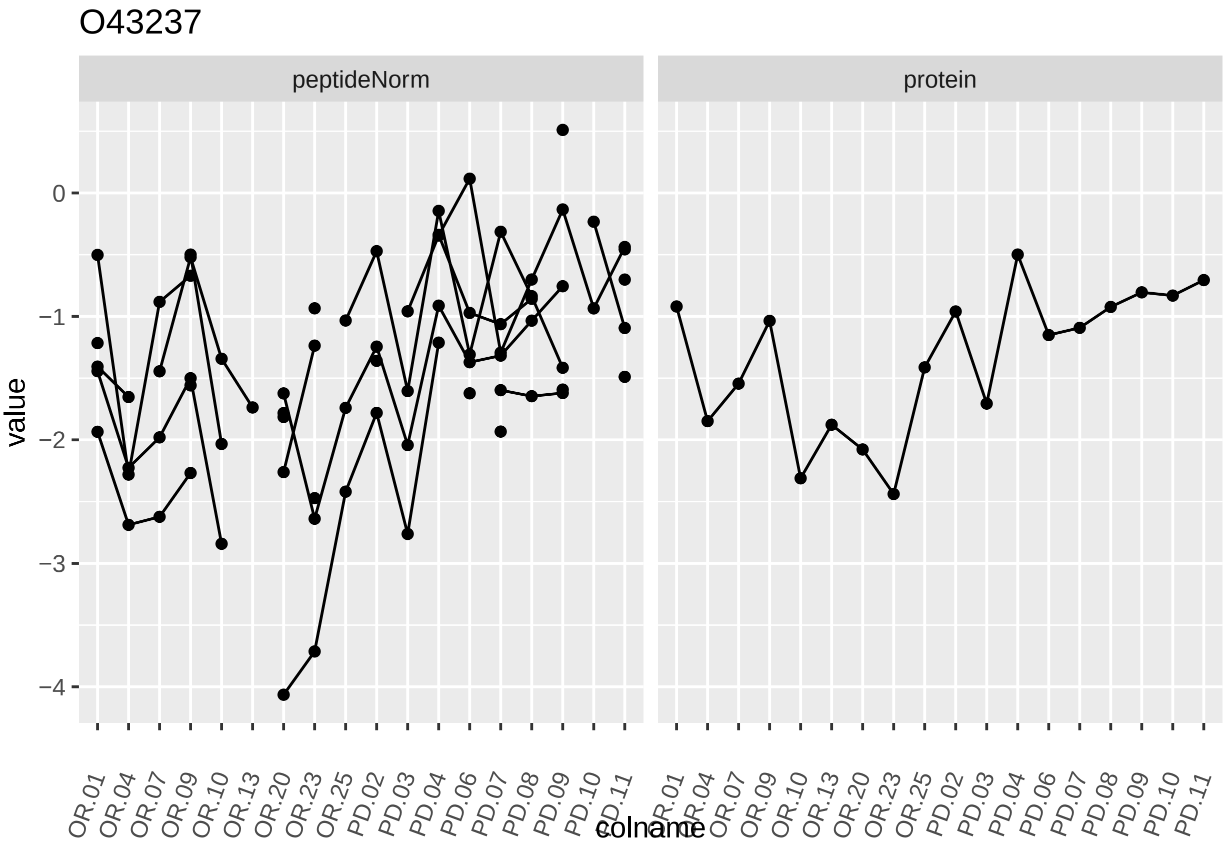

Q15126
peptideNorm
protein
value
1
0
−1
−2
−3
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11

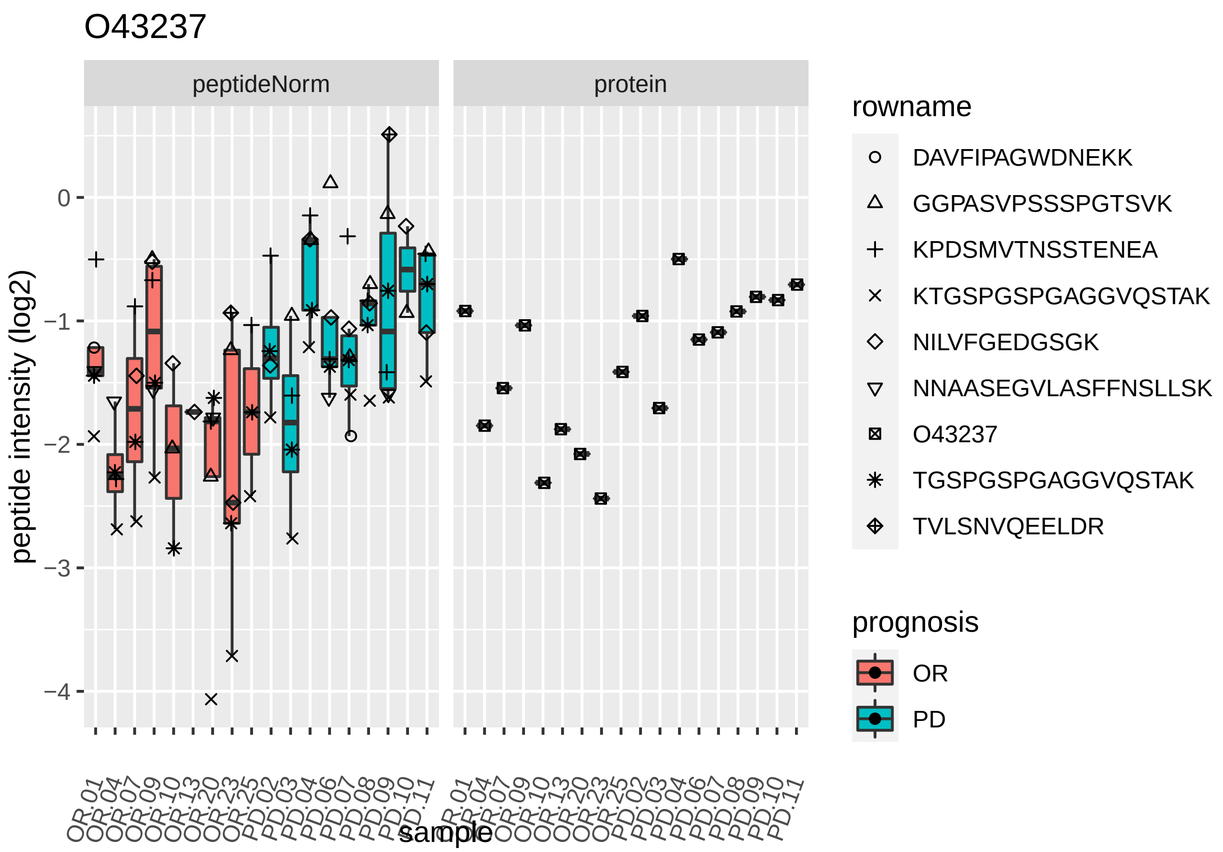

Q15126
peptideNorm
protein
peptide intensity (log2)
1
0
−1
−2
−3
sample
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
rowname
DFVTEALQSR
EAYGAVTQTVR
LEEQLENLIEFIR
LLDTSTYK
LVLLFSGK
Q15126
VSDIQWFR
VVALEQSR
prognosis
OR
PD


P07741
peptideNorm
protein
value
2
0
−2
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11



P07741
peptideNorm
protein
peptide intensity (log2)
2
0
−2
sample
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11
rowname
○ ADSELQLVEQR
△ AELEIQK
+ DISPVLKDPASFR
× GFLFGPSLAQELGLGCVLIR
◇ GKLPGPTLWASYSLEYGK
▽ LAPVPFFSLLQYE
⊠ P07741
✳ SFPDFPTPGVVFR
⊕ VVVVDDLLATGGTMNAACELLGR
prognosis
OR
PD


O43237
peptideNorm
protein
value
0
−1
−2
−3
−4
colname
OR.01
OR.04
OR.07
OR.09
OR.10
OR.13
OR.20
OR.23
OR.25
PD.02
PD.03
PD.04
PD.06
PD.07
PD.08
PD.09
PD.10
PD.11



5 Session Info

With respect to reproducibility, it is highly recommended to include a session info in your script so that readers of your output can see your particular setup of R.

```
sessionInfo()
```

```
## R version 4.2.2 (2022-10-31)
## Platform: x86_64-pc-linux-gnu (64-bit)
## Running under: Ubuntu 20.04.5 LTS
##
## Matrix products: default
## BLAS:   /usr/lib/x86_64-linux-gnu/blas/libblas.so.3.9.0
## LAPACK: /usr/lib/x86_64-linux-gnu/lapack/liblapack.so.3.9.0
##
## locale:
##  [1] LC_CTYPE=C.UTF-8       LC_NUMERIC=C           LC_TIME=C.UTF-8
##  [4] LC_COLLATE=C.UTF-8     LC_MONETARY=C.UTF-8    LC_MESSAGES=C.UTF-8
##  [7] LC_PAPER=C.UTF-8       LC_NAME=C              LC_ADDRESS=C
## [10] LC_TELEPHONE=C         LC_MEASUREMENT=C.UTF-8 LC_IDENTIFICATION=C
##
## attached base packages:
## [1] stats4    stats     graphics  grDevices datasets  utils     methods
## [8] base
```

```
##
## other attached packages:
##  [1] ExploreModelMatrix_1.8.0    plotly_4.10.0
##  [3] msqrob2_1.4.0               QFeatures_1.6.0
##  [5] MultiAssayExperiment_1.22.0 SummarizedExperiment_1.26.1
##  [7] Biobase_2.56.0              GenomicRanges_1.48.0
##  [9] GenomeInfoDb_1.32.2         IRanges_2.30.0
## [11] S4Vectors_0.34.0            BiocGenerics_0.42.0
## [13] MatrixGenerics_1.8.0        matrixStats_0.62.0
## [15] limma_3.52.1                forcats_0.5.1
## [17] stringr_1.4.1               dplyr_1.0.9
## [19] purrr_0.3.4                 readr_2.1.2
## [21] tidyr_1.2.0                 tibble_3.1.7
## [23] ggplot2_3.3.6               tidyverse_1.3.2
##
## loaded via a namespace (and not attached):
##   [1] googledrive_2.0.0       minqa_1.2.4             colorspace_2.0-3
##   [4] ellipsis_0.3.2          XVector_0.36.0          fs_1.5.2
##   [7] clue_0.3-61             farver_2.1.0            DT_0.23
##  [10] fansi_1.0.3             lubridate_1.8.0         xml2_1.3.3
##  [13] codetools_0.2-18        splines_4.2.2           knitr_1.40.1
##  [16] jsonlite_1.8.0          nloptr_2.0.3            broom_0.8.0
##  [19] cluster_2.1.3           dbplyr_2.1.1            shinydashboard_0.7.2
##  [22] shiny_1.7.1             BiocManager_1.30.18     compiler_4.2.2
##  [25] httr_1.4.3              backports_1.4.1         assertthat_0.2.1
##  [28] Matrix_1.4-1            fastmap_1.1.0           lazyeval_0.2.2
##  [31] gargle_1.2.0            cli_3.3.0               later_1.3.0
##  [34] htmltools_0.5.2         tools_4.2.2             igraph_1.3.2
##  [37] gtable_0.3.0            glue_1.6.2              GenomeInfoDbData_1.2.8
##  [40] Rcpp_1.0.8.3            cellranger_1.1.0        jquerylib_0.1.4
##  [43] vctrs_0.4.1             nlme_3.1-157            rintrojs_0.3.0
##  [46] xfun_0.33               lme4_1.1-29             rvest_1.0.2
##  [49] mime_0.12               lifecycle_1.0.1         renv_0.15.4
##  [52] googlesheets4_1.0.0     zlibbioc_1.42.0         MASS_7.3-57
##  [55] scales_1.2.0            promises_1.2.0.1        hms_1.1.1
##  [58] ProtGenerics_1.28.0     parallel_4.2.2          AnnotationFilter_1.20.0
##  [61] yaml_2.3.5              sass_0.4.1              stringi_1.7.8
##  [64] highr_0.9               boot_1.3-28             BiocParallel_1.30.2
##  [67] rlang_1.0.2             pkgconfig_2.0.3         bitops_1.0-7
##  [70] evaluate_0.16           lattice_0.20-45         htmlwidgets_1.5.4
##  [73] labeling_0.4.2          cowplot_1.1.1           tidyselect_1.1.2
##  [76] magrittr_2.0.3          R6_2.5.1                generics_0.1.2
##  [79] DelayedArray_0.22.0     DBI_1.1.2               pillar_1.7.0
##  [82] haven_2.5.0             withr_2.5.0             MsCoreUtils_1.8.0
##  [85] RCurl_1.98-1.6          modelr_0.1.8            crayon_1.5.1
##  [88] utf8_1.2.2              tzdb_0.3.0              rmarkdown_2.14
##  [91] grid_4.2.2              readxl_1.4.0            data.table_1.14.2
##  [94] reprex_2.0.1            digest_0.6.29           xtable_1.8-4
##  [97] httpuv_1.6.5            munsell_0.5.0           viridisLite_0.4.0
## [100] bslib_0.3.1             shinyjs_2.1.0
```