# RNA-seq Analysis

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**Change for each project**

```
## [1] "Levels of gRNA factor:"
```

```
##  [1] "LUC"     "BMI1.1"  "BMI1.3"  "CBX2.1"  "CBX2.3"  "CBX4.1"  "CBX4.2"
##  [8] "CBX8.1"  "CBX8.2"  "EZH2.3"  "EZH2.5"  "H3F3A.2" "H3F3A.3"
```

```
## [1] "Levels of gene target factor:"
```

```
## [1] "LUC"    "BMI1"  "CBX2"  "CBX4"  "CBX8"  "EZH2"  "H3F3A"
```

```
## [1] "Levels of genotype factor:"
```

```
## [1] "K27M+"   "K27M_KO"
```

```
## [1] "Levels of condition factor:"
```

```
##  [1] "LUC_K27M+"       "BMI1.1_K27M_KO"  "BMI1.1_K27M+"    "BMI1.3_K27M_KO"
##  [5] "BMI1.3_K27M+"    "CBX2.1_K27M_KO"  "CBX2.1_K27M+"    "CBX2.3_K27M_KO"
##  [9] "CBX2.3_K27M+"    "CBX4.1_K27M_KO"  "CBX4.1_K27M+"    "CBX4.2_K27M_KO"
## [13] "CBX4.2_K27M+"    "CBX8.1_K27M_KO"  "CBX8.1_K27M+"    "CBX8.2_K27M_KO"
## [17] "CBX8.2_K27M+"    "EZH2.3_K27M_KO"  "EZH2.3_K27M+"    "EZH2.5_K27M_KO"
## [21] "EZH2.5_K27M+"    "H3F3A.2_K27M_KO" "H3F3A.2_K27M+"   "H3F3A.3_K27M_KO"
## [25] "H3F3A.3_K27M+"   "LUC_K27M_KO"
```

```
## [1] "Levels of treatment factor:"
```

```
##  [1] "LUC_K27M+"     "BMI1_K27M_KO"  "BMI1_K27M+"    "CBX2_K27M_KO"
##  [5] "CBX2_K27M+"    "CBX4_K27M_KO"  "CBX4_K27M+"    "CBX8_K27M_KO"
##  [9] "CBX8_K27M+"    "EZH2_K27M_KO"  "EZH2_K27M+"    "H3F3A_K27M_KO"
## [13] "H3F3A_K27M+"   "LUC_K27M_KO"
```

```
## [1] "Levels of group factor:"
```

```
##  [1] "LUC_K27M+_A"      "BMI1_K27M_KO_A"  "BMI1_K27M_KO_B"  "BMI1_K27M+_A"
##  [5] "BMI1_K27M+_B"     "CBX2_K27M_KO_A"  "CBX2_K27M_KO_B"  "CBX2_K27M+_A"
##  [9] "CBX2_K27M+_B"     "CBX4_K27M_KO_A"  "CBX4_K27M_KO_B"  "CBX4_K27M+_A"
## [13] "CBX4_K27M+_B"     "CBX8_K27M_KO_A"  "CBX8_K27M_KO_B"  "CBX8_K27M+_A"
## [17] "CBX8_K27M+_B"     "EZH2_K27M_KO_A"  "EZH2_K27M_KO_B"  "EZH2_K27M+_A"
## [21] "EZH2_K27M+_B"     "H3F3A_K27M_KO_A" "H3F3A_K27M_KO_B" "H3F3A_K27M+_A"
## [25] "H3F3A_K27M+_B"    "LUC_K27M_KO_A"   "LUC_K27M_KO_B"   "LUC_K27M+_B"
```

```
## pdf
##   2
```

```
## [1] 64272
```

```
## [1] 20195
```
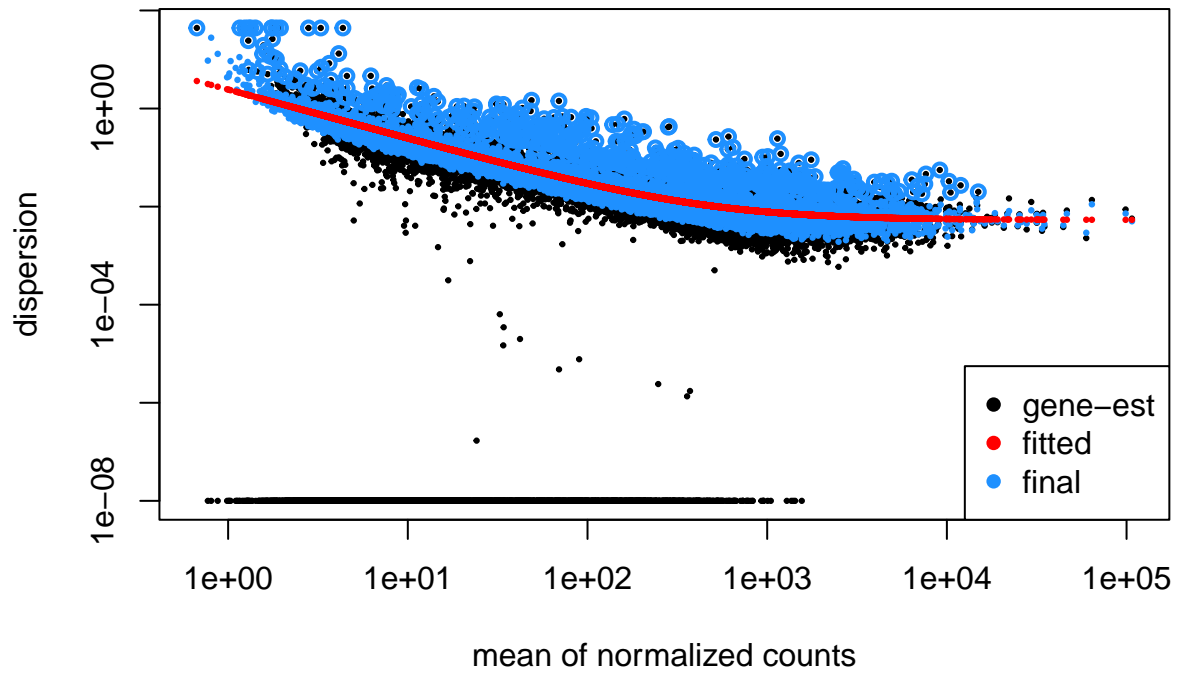


```
## [1] "condition"    "LUC_K27M_KO" "LUC_K27M+"
```

```
## [1] "condition"      "CBX4.1_K27M_KO" "LUC_K27M+"
```

```
## [1] "condition"      "CBX4.2_K27M_KO" "LUC_K27M+"
```

```
## [1] "condition"      "CBX2.1_K27M_KO" "LUC_K27M+"
```

```
## [1] "condition"      "CBX2.3_K27M_KO" "LUC_K27M+"
```

```
## [1] "condition"      "EZH2.3_K27M_KO" "LUC_K27M+"
```

```
## [1] "condition"      "EZH2.5_K27M_KO" "LUC_K27M+"
```

```
## [1] "condition"      "CBX8.1_K27M_KO" "LUC_K27M+"
```

```
## [1] "condition"      "CBX8.2_K27M_KO" "LUC_K27M+"

## [1] "condition"      "BMI1.1_K27M_KO" "LUC_K27M+"

## [1] "condition"      "BMI1.3_K27M_KO" "LUC_K27M+"

## [1] "condition"     "CBX4.1_K27M+" "LUC_K27M+"

## [1] "condition"     "CBX4.2_K27M+" "LUC_K27M+"

## [1] "condition"     "CBX2.1_K27M+" "LUC_K27M+"

## [1] "condition"     "CBX2.3_K27M+" "LUC_K27M+"

## [1] "condition"     "EZH2.3_K27M+" "LUC_K27M+"

## [1] "condition"     "EZH2.5_K27M+" "LUC_K27M+"

## [1] "condition"     "CBX8.1_K27M+" "LUC_K27M+"

## [1] "condition"     "CBX8.2_K27M+" "LUC_K27M+"

## [1] "condition"     "BMI1.1_K27M+" "LUC_K27M+"

## [1] "condition"     "BMI1.3_K27M+" "LUC_K27M+"

## [1] "condition"      "CBX4.1_K27M_KO" "LUC_K27M_KO"

## [1] "condition"      "CBX4.2_K27M_KO" "LUC_K27M_KO"

## [1] "condition"      "CBX2.1_K27M_KO" "LUC_K27M_KO"

## [1] "condition"      "CBX2.3_K27M_KO" "LUC_K27M_KO"

## [1] "condition"      "EZH2.3_K27M_KO" "LUC_K27M_KO"

## [1] "condition"      "EZH2.5_K27M_KO" "LUC_K27M_KO"

## [1] "condition"      "CBX8.1_K27M_KO" "LUC_K27M_KO"

## [1] "condition"      "CBX8.2_K27M_KO" "LUC_K27M_KO"

## [1] "condition"      "BMI1.1_K27M_KO" "LUC_K27M_KO"

## [1] "condition"      "BMI1.3_K27M_KO" "LUC_K27M_KO"

## [1] "condition"    "LUC_K27M+"    "LUC_K27M_KO"
```

```
## [1] "condition"    "CBX4.1_K27M+" "LUC_K27M_KO"

## [1] "condition"    "CBX4.2_K27M+" "LUC_K27M_KO"

## [1] "condition"    "CBX2.1_K27M+" "LUC_K27M_KO"

## [1] "condition"    "CBX2.3_K27M+" "LUC_K27M_KO"

## [1] "condition"    "EZH2.3_K27M+" "LUC_K27M_KO"

## [1] "condition"    "EZH2.5_K27M+" "LUC_K27M_KO"

## [1] "condition"    "CBX8.1_K27M+" "LUC_K27M_KO"

## [1] "condition"    "CBX8.2_K27M+" "LUC_K27M_KO"

## [1] "condition"    "BMI1.1_K27M+" "LUC_K27M_KO"

## [1] "condition"    "BMI1.3_K27M+" "LUC_K27M_KO"

## [1] "Making comparison: CBX4.1_K27M+_vs_K27M_KO"

## [1] "Making comparison: CBX4.2_K27M+_vs_K27M_KO"

## [1] "Making comparison: CBX2.1_K27M+_vs_K27M_KO"

## [1] "Making comparison: CBX2.3_K27M+_vs_K27M_KO"

## [1] "Making comparison: EZH2.3_K27M+_vs_K27M_KO"

## [1] "Making comparison: EZH2.5_K27M+_vs_K27M_KO"

## [1] "Making comparison: CBX8.1_K27M+_vs_K27M_KO"

## [1] "Making comparison: CBX8.2_K27M+_vs_K27M_KO"

## [1] "Making comparison: BMI1.1_K27M+_vs_K27M_KO"

## [1] "Making comparison: BMI1.3_K27M+_vs_K27M_KO"
```
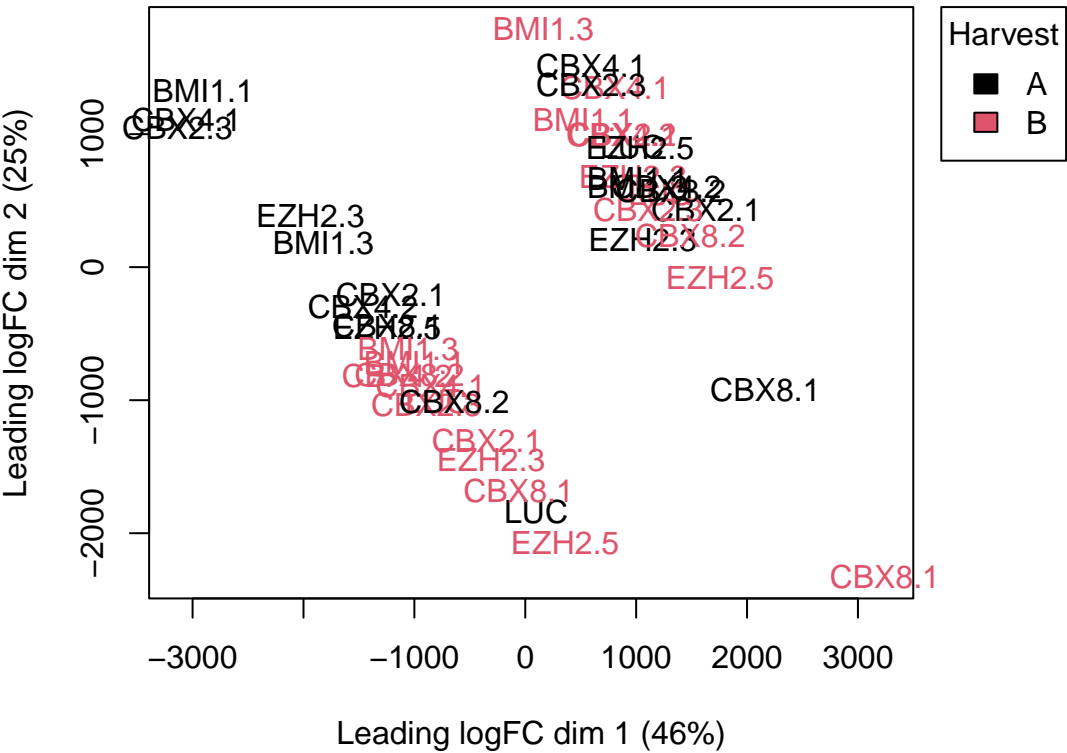
**MDS plots (all genotypes)**

MDS plots (by genotypes)

## K27M+



## K27M KO