a  Dataset #1: TNF (GSE64233): Replicate comparison

Original data

- NES = -2.15
- FDR = 0.002

Transcript length (nucleotides)

Fold change (log2)

Background

GO_MITOCHONDRIAL_PROTEIN_COMPLEX

Enrichment plot:

p = 5e-20

Before

FDR = 0.81

After

NES = -1.18

Fold change (log2)

Length (log2)

Supplementary Figure 3
Supplementary Figure 3

Dataset #1: TNF (GSE64233): Replicate comparison

Original data

cqn normalization

Corrected data

Before

After
C Dataset #1: TNF (GSE64233): Replicate comparison

Original data

Enrichment plot:
GO_ORGANELLE_INNER_MEMBRANE

NES = -1.93
FDR = 0.015

p = 4e-25

Transcript length (nucleotides)

Fold change (log2)

Length (log2)

Supplementary Figure 3
Dataset #10: shSRC-1 in BC cells (GSE99647): Replicate comparison

**Original data**

**cqn normalization**

**Corrected data**

Supplementary Figure 3
Dataset #10: shSRC-1 in BC cells (GSE99647): Replicate comparison

Original data

Transcript length

p = 2e-33

NES = 2.69  
FDR < 0.001

Before

Fold change (log2)

Length (log2)

After

Fold change (log2)

Length (log2)

Corrected data

Transcript length (normalized)

Fold change (log2)

Length (log2)

NES = 1.62  
FDR = 0.36

Supplementary Figure 3
Dataset #10: shSRC-1 in BC cells (GSE99647): Replicate comparison

Supplementary Figure 3
Dataset #10: shSRC-1 in BC cells (GSE99647): Replicate comparison

Supplementary Figure 3
After normalization

\[ p = 9 \times 10^{-10} \]

NES = -2.38
FDR < 0.001

Before

NES = 1.47
FDR = 0.55

h Dataset #8: NCS treated vs. untreated MCF-7 cells (GSE101738): Replicate comparison

Original data

\[ \text{Enrichment plot: GO_PROTEIN_TARGETING_TO_MEMBRANE} \]

Length (log2)

Fold change (log2)

Transcript length (nucleotides)

Supplementary Figure 3
Dataset #8: NCS treated vs. untreated MCF-7 cells (GSE101738): Replicate comparison

Original data

Before normalization

p = 6e-18

NES = 1.86
FDR = 0.03

After normalization

NES = 1.03
FDR = 0.77

Supplementary Figure 3
Dataset #8: NCS treated vs. untreated MCF-7 cells (GSE101738): Replicate comparison

**Original data**

- **p = 9e-24**
- NES = -3.10
- FDR < 0.001

**cqn normalization**

- **Before**
  - Fold change (log2)
  - Length (log2)
  - Transcript length (nucleotides)

- **After**
  - Fold change (log2)
  - Length (log2)
  - Transcript length (nucleotides)

**Corrected data**

- **Before**
  - Fold change (log2)
  - Length (log2)
  - Transcript length (nucleotides)

- **After**
  - Fold change (log2)
  - Length (log2)
  - Transcript length (nucleotides)

Supplementary Figure 3
Dataset #8: NCS treated vs. untreated MCF-7 cells (GSE101738): Replicate comparison

**Before cqn normalization**

- **Original data**

  - **Enrichment plot:**
    - **GO_ELASTATION_OF_PROTEIN_LOCALIZATION**
    - NES = -2.97
    - FDR < 0.001

- **Fold change (log2)**
  - Data set #8: NCS treated vs. untreated MCF-7 cells (GSE101738): Replicate comparison
  - **Transcript length (nucleotides)**
    - Original data
    - Corrected data

**cqn normalization**

- **Before**

  - **p = 1e-19**

  - **Fold change (log2)**
    - Length (log2)

- **After**

  - **Fold change (log2)**
    - Length (log2)

**Corrected data**

- **Enrichment plot:**
  - **GO_ELASTATION_OF_PROTEIN_LOCALIZATION**
  - NES = 1.77
  - FDR = 0.46

**Supplementary Figure 3**
Dataset #18: AI-10-49 treatment on ME-1 cells (GSE101788): Replicate comparison

**Original data**

Enrichment plot: GO_RIBOSOME

NES = -2.23
FDR = 0.002

**p = 2e-33**

**cqn normalization**

**Before**

Fold change (log2) vs Length (log2)

**After**

Fold change (log2) vs Length (log2)

**Corrected data**

Enrichment plot: GO_RIBOSOME

NES = -1.20
FDR = 0.88

Supplementary Figure 3
Dataset #18: AI-10-49 treatment on ME-1 cells (GSE101788): Replicate comparison

Original data

P = 4e-25
NES = -2.20
FDR < 0.001

Data set #18: AI-10-49 treatment on ME-1 cells (GSE101788): Replicate comparison

Enrichment plot: GO_ORGANELLE_INNER_MEMBRANE

NES = -2.20
FDR < 0.001

q = 4e-25

FDR = 0.99

Corrected data

NES = -1.00
FDR = 0.99

Supplementary Figure 3
Dataset #18: AI-10-49 treatment on ME-1 cells (GSE101788): Replicate comparison

Original data

- NES = -2.14
- FDR = 0.002

CqN normalization

- Before
- Fold change (log2)
- Length (log2)

Corrected data

- After
- Fold change (log2)
- Length (log2)

Supplementary Figure 3