

# Normalizing counts

Because different samples have different total numbers of reads, it would be misleading to calculate differential expression by comparing read count numbers for genes across samples without normalizing for the total number of reads.

- Click the **Filtered counts** data node
- Click **Normalization and scaling** in the task menu
- Click **Normalization** (Figure 1)

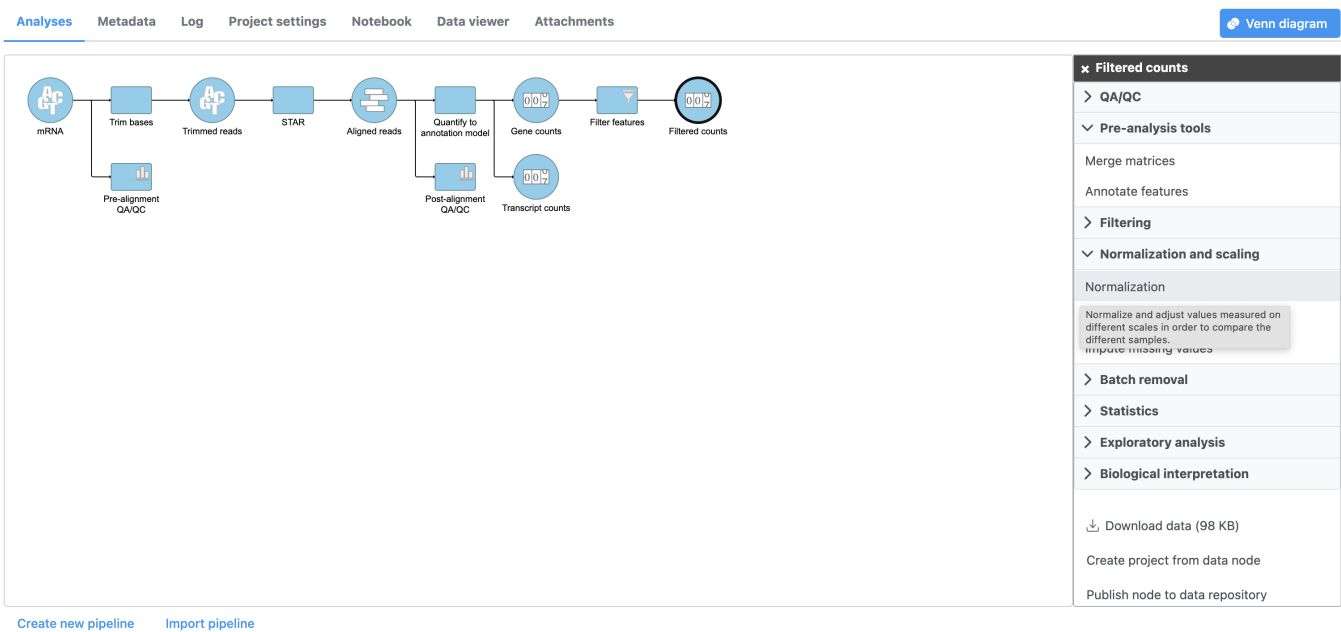


Figure 5. Invoking Normalize counts

The *Count normalization* menu will open (Figure 2).

## Count normalization

### Transform on

☒ Samples ☐ Features

### Available methods

Absolute value  
Add  
Antilog  
Arcsinh  
CLR  
CPM (counts per million)  
Divide by  
FPKM  
Log  
Logit  
Lower bound

Drag  
and  
drop  
→

### Selected methods

👍 Use recommended

Back

Finish

Figure 6. Read counts normalization task menu

Normalization can be performed by sample or by feature. By sample is selected by default; this is appropriate for the tutorial data set.

Available normalization methods are listed in the left-hand panel. For more information about these options, please see the [Normalize counts](#) user guide.

For this tutorial, we will use the recommended default normalization settings.

- Select



This adds the *Median ratio* normalization method, which is suitable for performing differential expression analysis using DESeq2 (Figure 3).

## Count normalization

### Transform on

☒ Samples ☐ Features

### Available methods

Absolute value  
Add  
Antilog  
Arcsinh  
CLR  
CPM (counts per million)  
Divide by  
FPKM  
Log  
Logit  
Lower bound

Drag  
and  
drop  
→

### Selected methods

👍 Use recommended

1. Median ratio (DESeq2 only)

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Finish

Figure 7. Recommended normalization settings

- Click **Finish** to perform normalization

A *Normalize counts* task node and a *Normalized counts* data node are added to the pipeline (Figure 4)

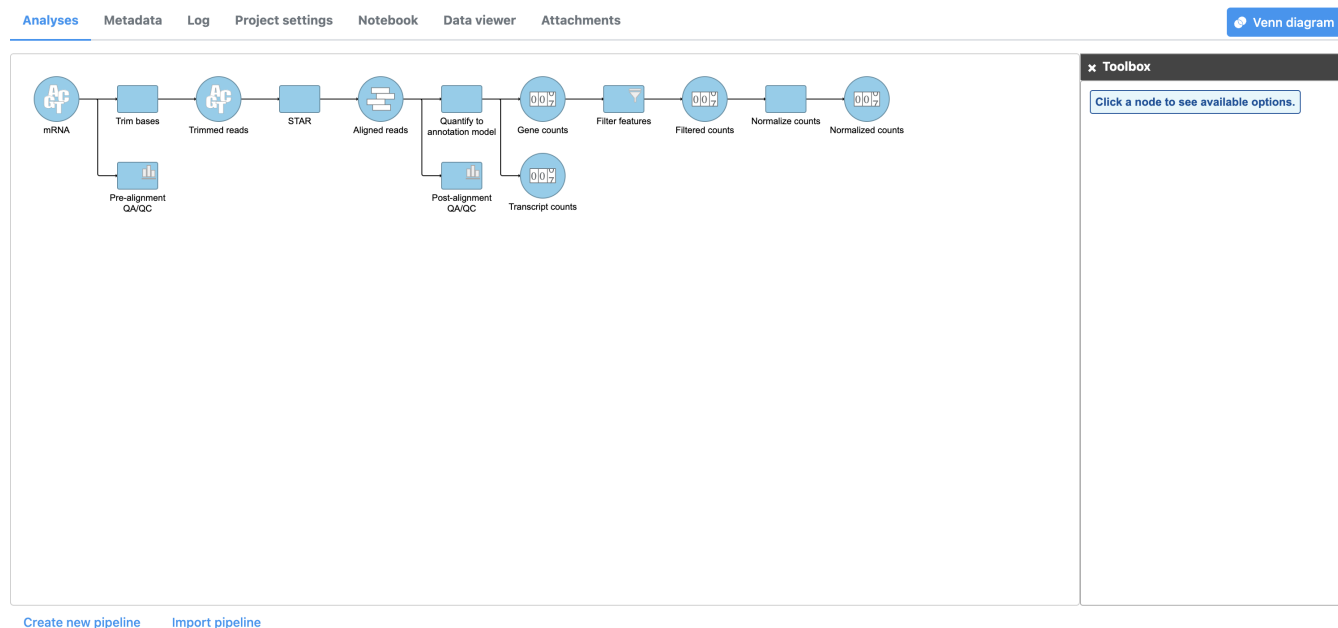


Figure 8. Normalize counts task node and Normalized counts data node

« [Filtering features](#) [Exploring the data set with PCA](#) »

## Additional Assistance

If you need additional assistance, please visit [our support page](#) to submit a help ticket or find phone numbers for regional support.



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