

RNA-Seq Pipeline Overview

Analysis for Walker lab

- Prepared for:
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- Process Executed on : Jan-10-2024

Data Access

- **Dropbox Folder**: /staging/01.RawData
- **Dropbox URL**: https://www.dropbox.com/scl/fo/gwtyop1kmngqgxvic67ur/h? rlkey=x8mvw2srw65mbr2vhmy4ug353&dl=0

FASTQ files

```
1.993Gi 2024-01-10 07:41:11 FB 2/FB 2 1.fq.gz
2.087Gi 2024-01-05 16:42:00 FB 2/FB 2 2.fq.gz
1.778Gi 2024-01-09 17:38:59 EV 3/EV 3 1.fq.gz
1.838Gi 2024-01-09 17:44:20 EV_3/EV_3_2.fq.gz
1.673Gi 2024-01-05 16:42:00 FB 3/FB 3 1.fq.gz
1.731Gi 2024-01-05 16:42:00 FB 3/FB 3 2.fq.gz
1.777Gi 2024-01-05 16:43:00 L6 3/L6 3 1.fq.gz
1.843Gi 2024-01-05 16:43:00 L6_3/L6_3_2.fq.gz
1.705Gi 2024-01-09 17:38:23 EV_4/EV_4_1.fq.gz
1.770Gi 2024-01-09 17:43:34 EV 4/EV 4 2.fq.gz
1.440Gi 2024-01-05 16:43:00 FB 4/FB 4 1.fq.gz
1.483Gi 2024-01-05 16:43:00 FB_4/FB_4_2.fq.gz
1.613Gi 2024-01-09 17:33:24 EV_2/EV_2_1.fq.gz
1.692Gi 2024-01-09 17:36:42 EV 2/EV 2 2.fq.gz
1.640Gi 2024-01-05 16:42:00 MT 2/MT 2 1.fq.gz
1.690Gi 2024-01-05 16:42:00 MT_2/MT_2_2.fq.gz
```



```
1.741Gi 2024-01-05 16:44:00 L6_4/L6_4_1.fq.gz

1.796Gi 2024-01-05 16:42:00 L6_4/L6_4_2.fq.gz

1.839Gi 2024-01-05 16:42:00 MT_4/MT_4_1.fq.gz

1.937Gi 2024-01-05 16:43:00 MT_4/MT_4_2.fq.gz

1.521Gi 2024-01-05 16:43:00 L6_2/L6_2_1.fq.gz

1.594Gi 2024-01-05 16:43:00 L6_2/L6_2_2.fq.gz

1.738Gi 2024-01-05 16:42:00 MT_3/MT_3_1.fq.gz

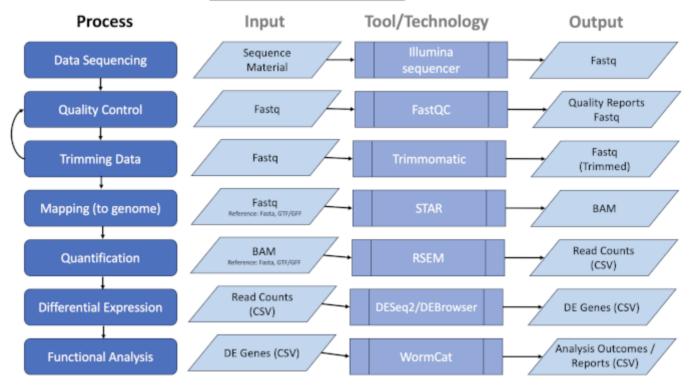
1.787Gi 2024-01-05 16:42:00 MT_3/MT_3_2.fq.gz
```

Gene Index files

Gene Index based on Wormbase Version: WS289

RNA Seq Process

RNA-Seq Process Flow





Pipeline Outputs

- MD5 Checksum Report
- FAST QC Report
- Multi QC Report
- Isoform Quantification
- Gene Quantification
- DESeq2 Gene Normalizations (Up, Down, All Expressed) & Visualizations
- WormCat Annotations and Visualizations of gene set enrichment data

Source Code

The provided tagged repository is available to create reproducible outputs from the RNA-Seq Pipeline.

Config https://github.com/DanH-UMassMed/Walker_Lab

Pipeline https://github.com/DanH-UMassMed/RNA-Seq-Nextflow -r v1.0.*