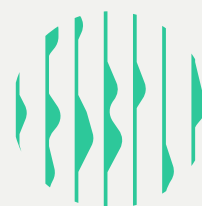




OMIQ Quick Guide

10 Easy Steps for Getting Started

OMIQ (www.omiq.ai) offers an innovative solution bridging both classical and high dimensional analysis in a pleasantly designed cloud software. Making collaboration easier whilst supporting automation and data management.



Contents

Try OMIQ for Free	2
Step 1: Upload your Files	3
Step 2: Create a Workflow	4
Step 3: Understanding the Workflow	5
Steps 4–4.2: Review the Scaling Task	6
Steps 5–5.2: Add a New Task	8
Step 6: Build a Gating Hierarchy	10
Steps 7–7.2: Create a Figure	11
Steps 8–8.2: Permute the Figure	13
Steps 9–9.2: Export the Figure	15
Step 10: Continue the Workflow	17
Frequently Asked Questions	18
Next Steps to Learn More	18

Try OMIQ for Free

If you haven't tried us before,
you can get a free 30-day trial
directly through our website.

app.omiq.ai/login



Start Your 30-Day OMIQ Free Trial

No credit card, no commitment required.

Email *

Password

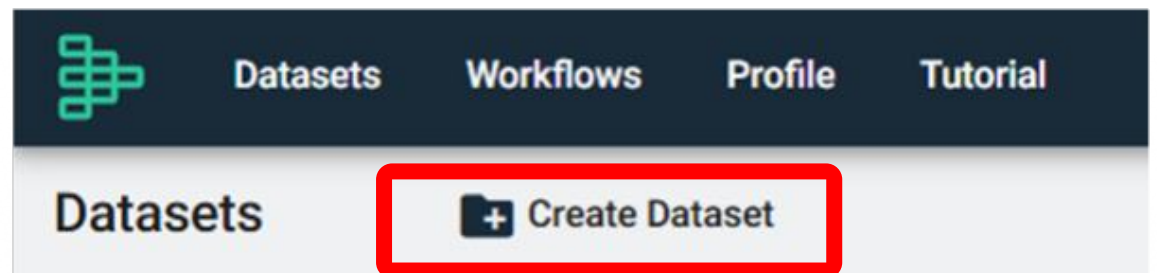
☐ I agree to the [terms of service](#) and [privacy policy](#)

Get Started

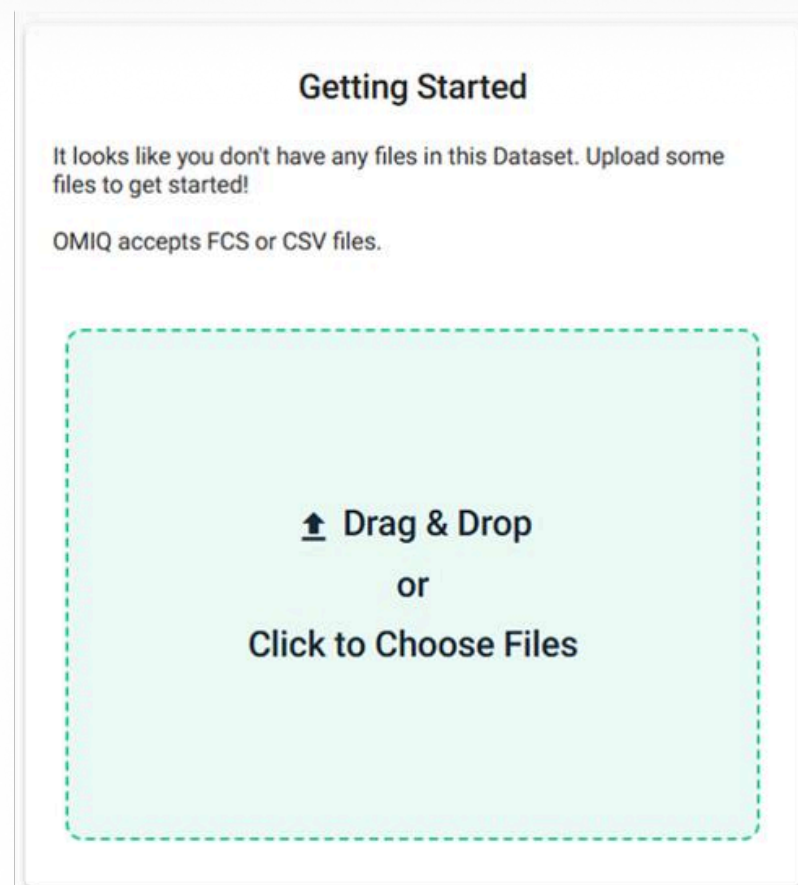
Already have an account? [Log in](#)

1 Upload your files.

A. Click Create Dataset.



B. Drag and Drop your files, or click to open your file explorer.



 **Tip** OMIQ accepts FCS 3.1, 3.2 and .CSV files.

2 Create a Workflow.

- Once your files have finished uploading, you can edit the details of your dataset and begin analysis.
 - Note: the file status will go from *Uploading..* to *Processing..* to *Complete*.
- We will add a New Workflow.
 - A Workflow is a piece of analysis in OMIQ.
- Create Workflow > **New Default**.

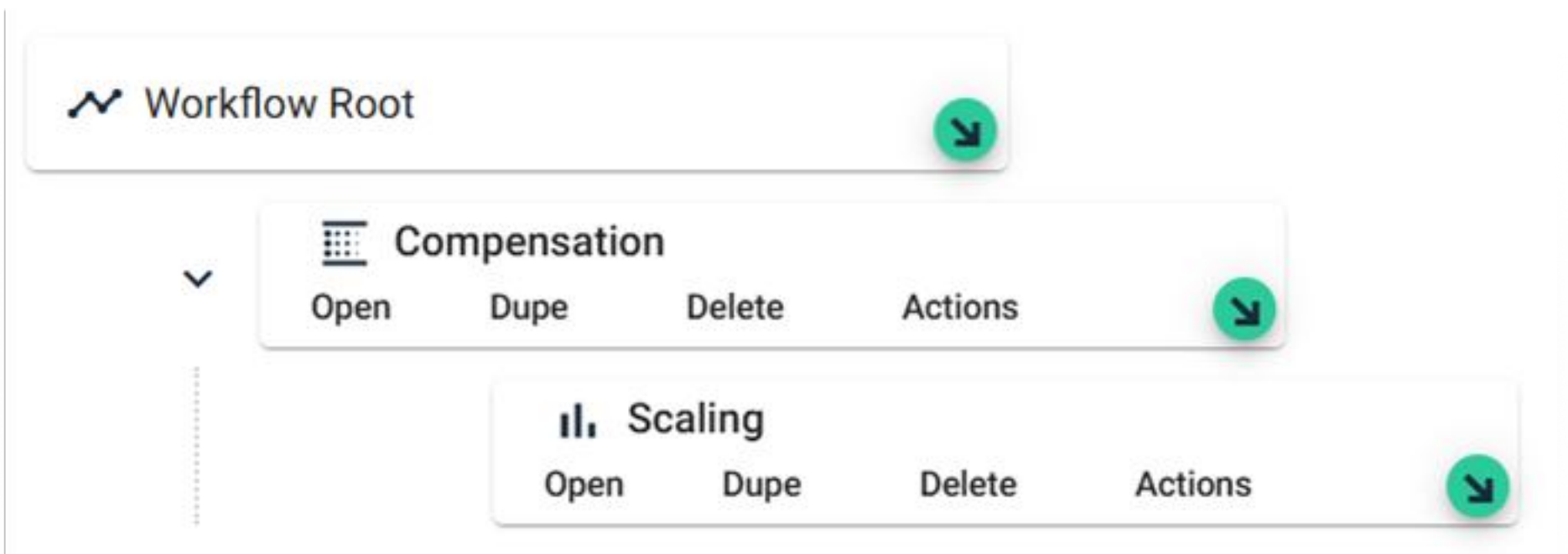
The screenshot displays the OMIQ interface. At the top, there is a header bar with 'Dataset Example Upload Name' on the left, 'File Actions' with a dropdown arrow in the center, and a red-bordered dropdown menu on the right. The dropdown menu is titled 'Create Workflow' and contains four options: 'New Default' (marked with a 'NEW' badge), 'From Template', 'From Workflow', and 'From Config File'. Below the header, there is a table with columns 'Files', 'Tags & Notes', 'File Metadata', and 'Feature N'. The 'Files' column is highlighted with a green underline. The table contains one row with the following data: 'Name (3)' in the 'Files' column, 'ID' in the 'File Metadata' column, and 'F52897642756054' in the 'Feature N' column. The 'Files' column also contains the text 'les' and 'nor 1.fcs'.

Files	Tags & Notes	File Metadata	Feature N
les		ID	
nor 1.fcs		F52897642756054	

3

Understanding the Workflow.

- Workflows exist as a series of tasks which are carried out on your data.
- Tasks are applied in a hierarchical and sequential step.
- In our example, first the data is compensated, and the output of that compensation task is the input for the scaling task.

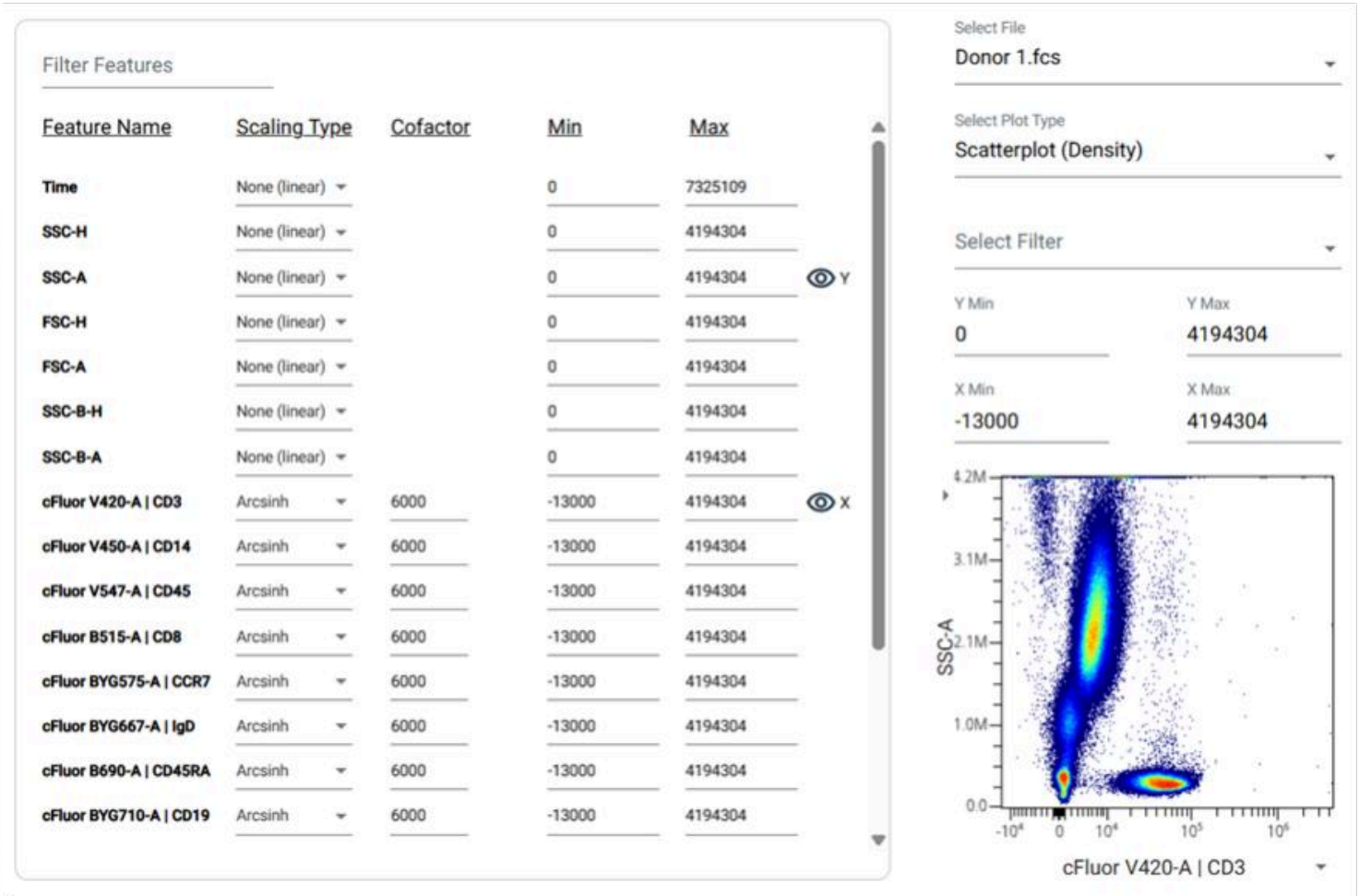


4.1

Review the Scaling Task.

Let's open the scaling task!

- We can then see the transformation being applied to our files.
- We can review and edit the **Scaling type**, the **cofactor**, and the **minimum** and **maximum** for every parameter in our dataset.



4.2

Save Changes to Tasks.

If you make any changes, make sure to click **save**.



We can then return to the workflow through the **return arrow**.



Tip

For more information on how to edit scaling visit:
omiq.ai/series/scale-and-transform-data

5 Add a New Task.

Let's add a task as a **child** of the scaling task. Remember, this task will be carried out on data which underwent both the compensation and scaling tasks.

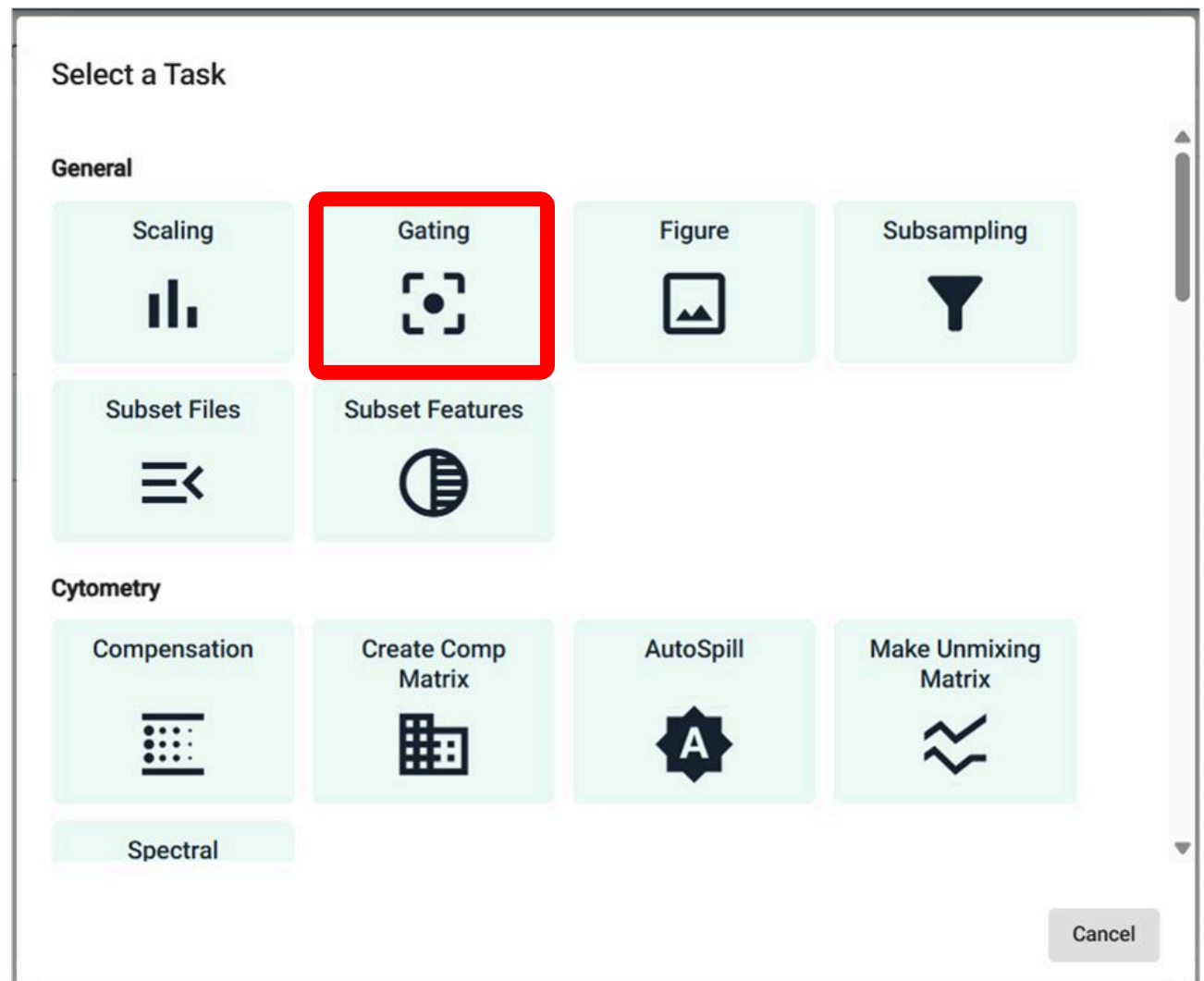
The screenshot displays a workflow editor interface. At the top, a 'Workflow Root' task is shown with a green circular button containing a downward arrow. Below it, a 'Compensation' task is visible, also with a similar green button. The 'Scaling' task, highlighted in light green, is the current focus. It has buttons for 'Open', 'Dupe', 'Delete', and 'Actions'. A red rectangular box highlights a green circular button with a downward arrow located at the bottom right of the 'Scaling' task. Below this button, a dark grey button labeled 'Add new child task' is visible. A vertical dotted line is positioned to the left of the 'Scaling' task.

Task Choices.

There are many different tasks we could add:

Some are simple, like **Gating**, and some are more advanced, like dimensionality reduction and clustering.

Let's add a **Gating** Task!



6 Build a Gating Hierarchy.

A. Add a gate

- Click on the Gate Type you would like to add, i.e. Polygon or Rectangle.
- Then click on the plot as to where you would like your gate to position.
You will be given a chance to name the gate.

B. Drill down into that population

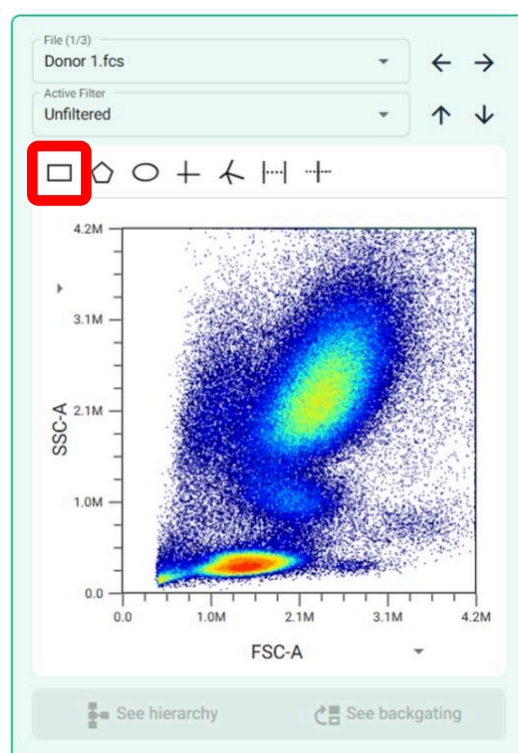
- You can double click on the population to filter the plot to that population.

C. Change the X and Y axes as necessary

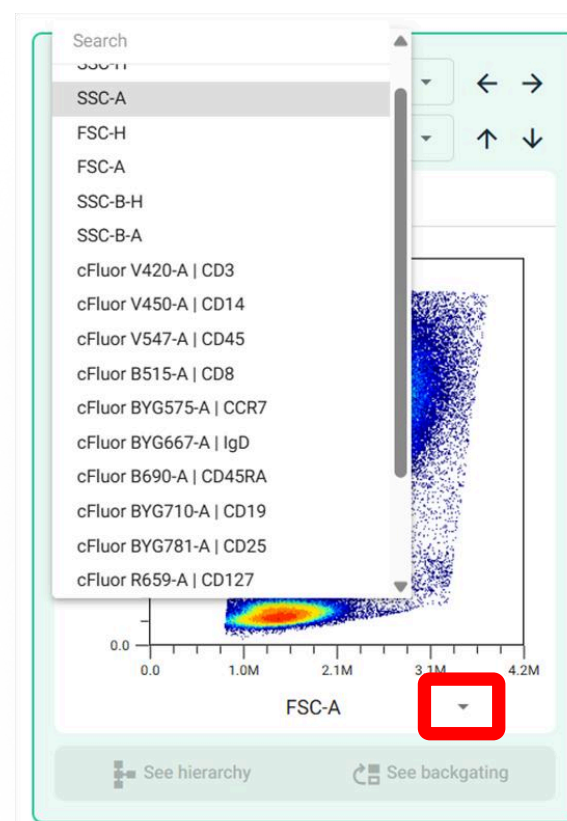
- If we click on the axis, we can change the associated feature.
You can type to search for any feature.

Continue this process until you have some gates to explore!

Once you have finished, remember to **Save** the task and navigate back to the Workflow.



A

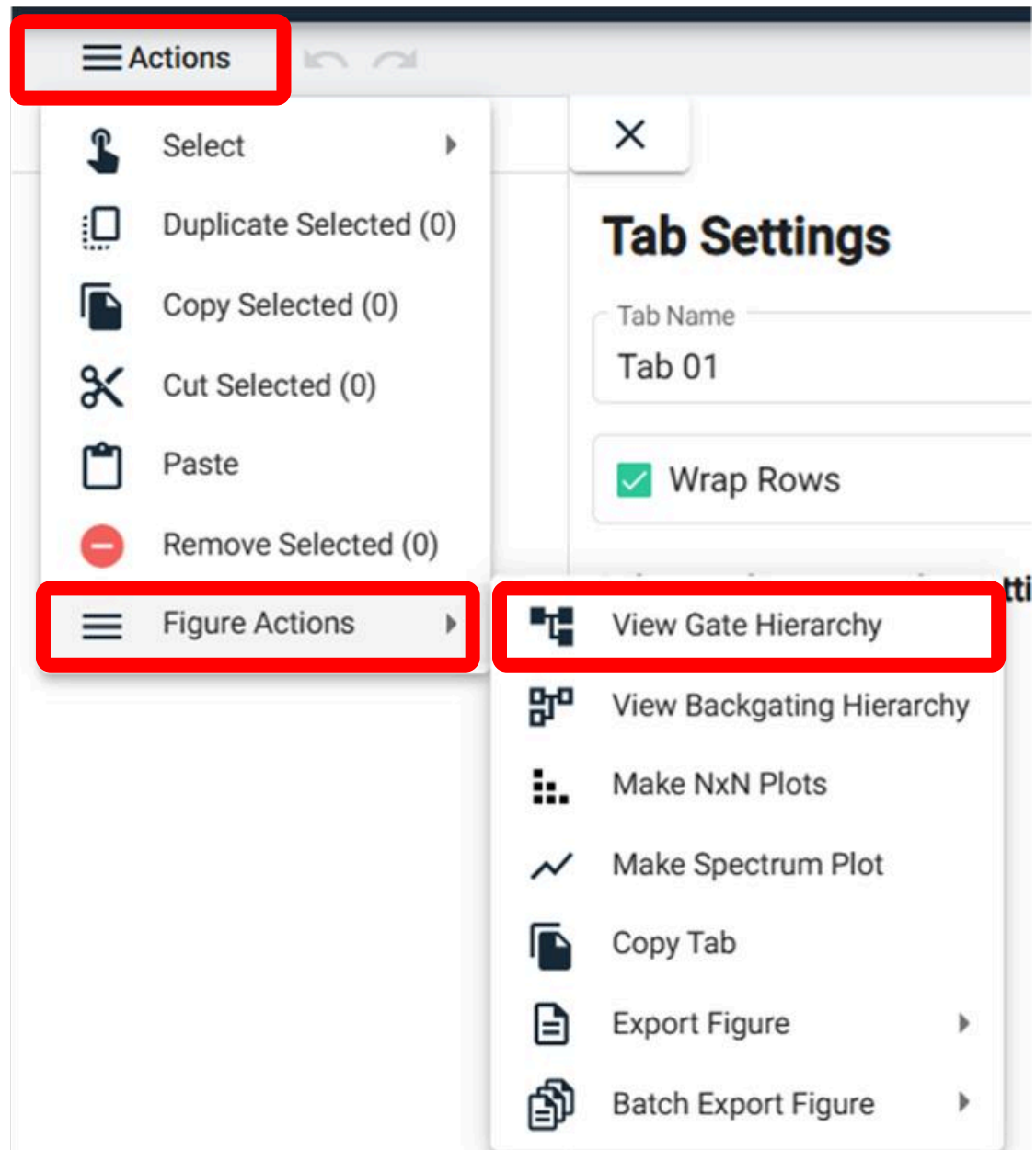


C

7 Create a Figure.

Let's add a child task to the workflow underneath the gating task.

- Once it's open, we can start adding plots.
- Let's add some plots to reflect the gating hierarchy we created.
- In the **Actions** tab, we can use **View Gating Hierarchy as a shortcut** for creating multiple plots.



7.2

Select the Right Filter.

Then select one filter here. OMIQ will generate the plots within your figure task to display this gating hierarchy for the first file in your dataset.

Select Filter(s) to Display Hierarchy

Choose Filter(s) 

Show Entire Lineage

Show all steps  

Cancel Submit

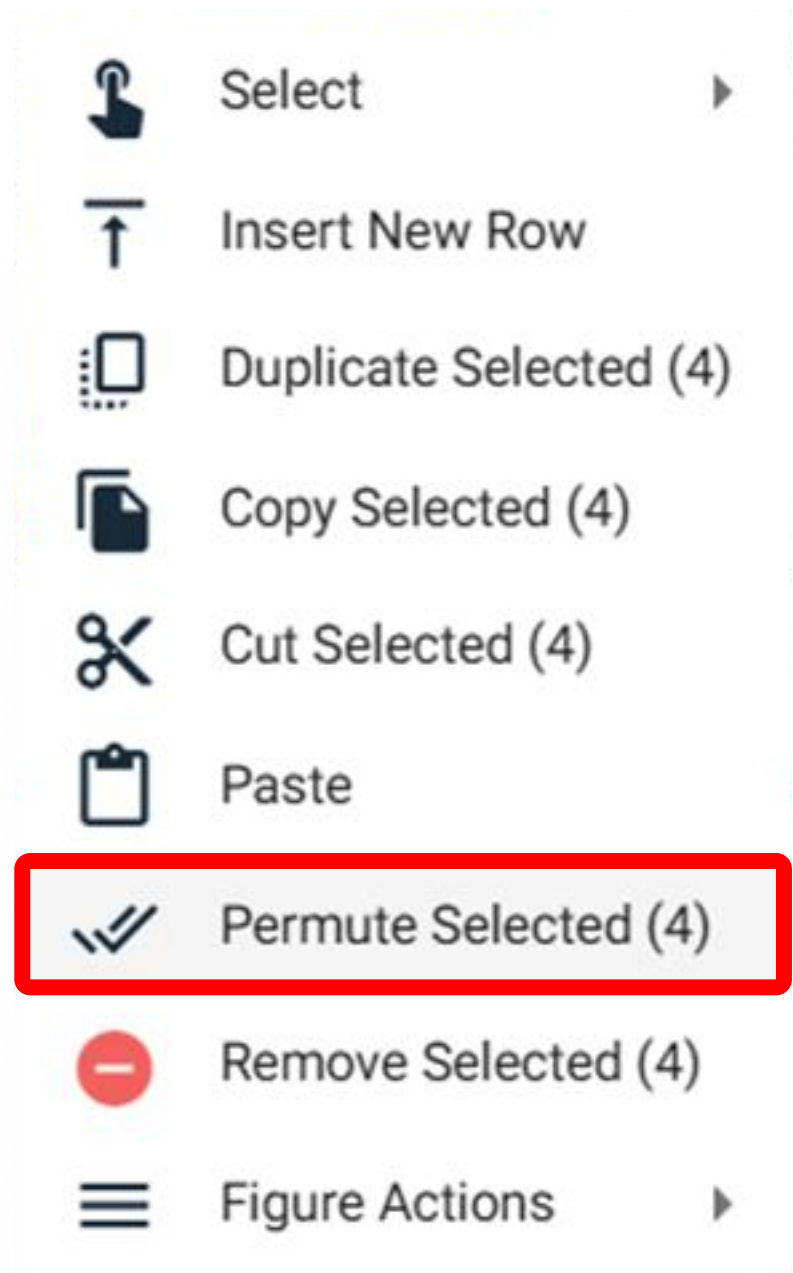
8

Permute the Figure.

However, we want to see the gating hierarchy for every file. So, let's use a function called **permute**.

Permute allows you to make multiple plots based on a rule.

- First, let's select all the plots.
- **CTRL + A** or **CMD + A**, or right-click **Select > Select All**.
- Then let's select **Permute**.
- Right-click on the Selected Plots > **Permute Selected**.



8.2

Within **Files**, select **All Files**. And click **New Row** (this will add each file to a new row).

Then click **Permute**.

The screenshot shows a file selection dialog with the following elements:

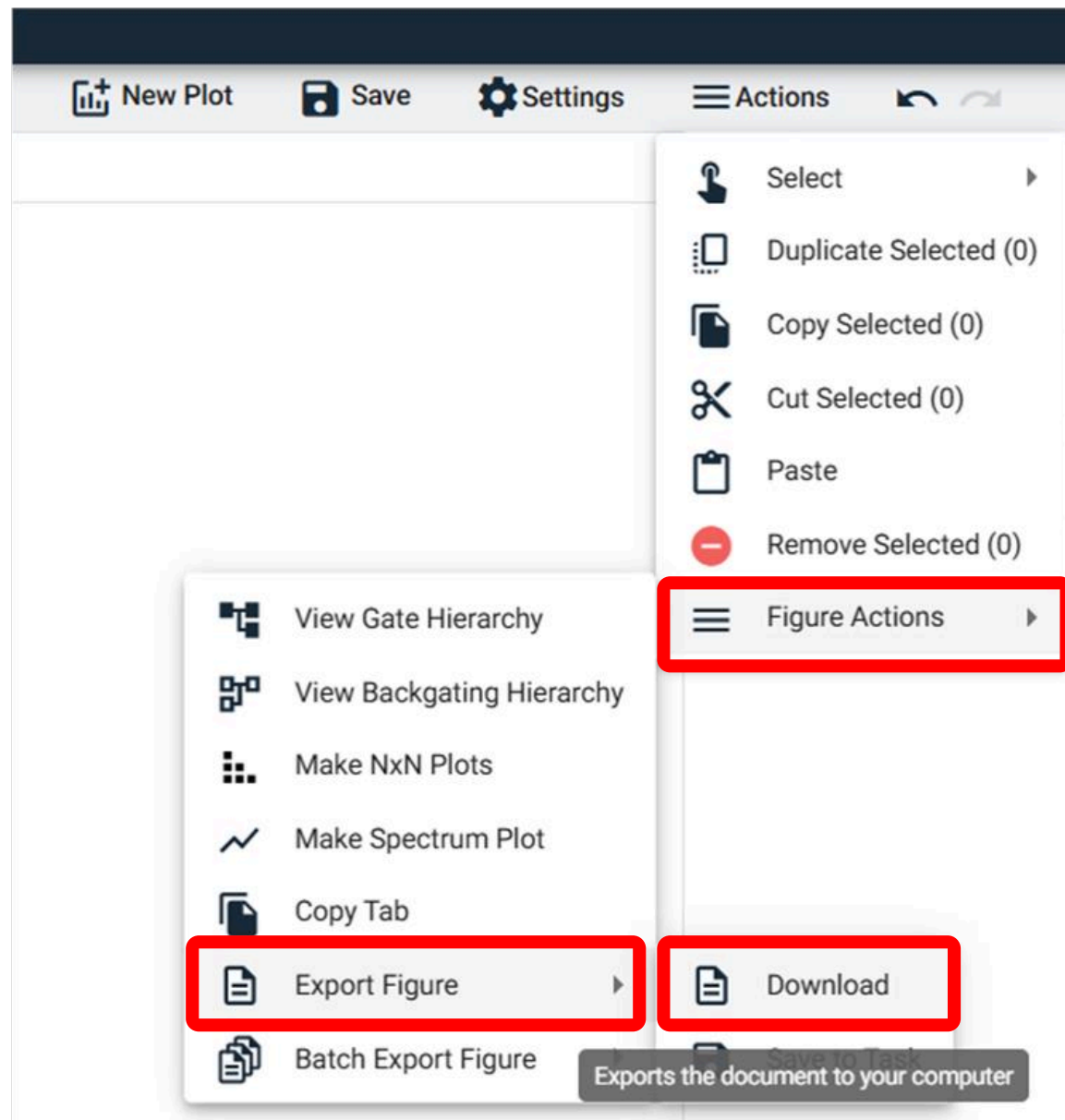
- File** section: Contains **Copy** and **Paste** buttons, and the text *showing 3 of 3, 3 selected*.
- Filter options** section: A list of files with checkboxes:
 - ☒ **Select All** (highlighted with a red box)
 - ☒ MC 3014559.fcs
 - ☒ MC 303444.fcs
 - ☒ MC 303458.fcs
- X-Axis**, **Y-Axis**, and **Filter** dropdown menus.
- Same row** and **New row** radio buttons: The **New row** option is selected and highlighted with a red box.
- Permute** button: A green button at the bottom right.

We now have a gating hierarchy for every file in our dataset.

9 Export the Figure.

Once again, let's use the **Actions** button, but now select **Export Figure**.

Let's **Download** the file.



9.2

Configure Export.

- Select either **PDF** or **PPT** (PowerPoint) as per your preference and click **Submit**.
- Your file will now download in the browser and be available once complete.

Once you have finished, remember to save the task and navigate back to the workflow.

Configure Export

Format

☒ PDF ☐ PPT

Cancel

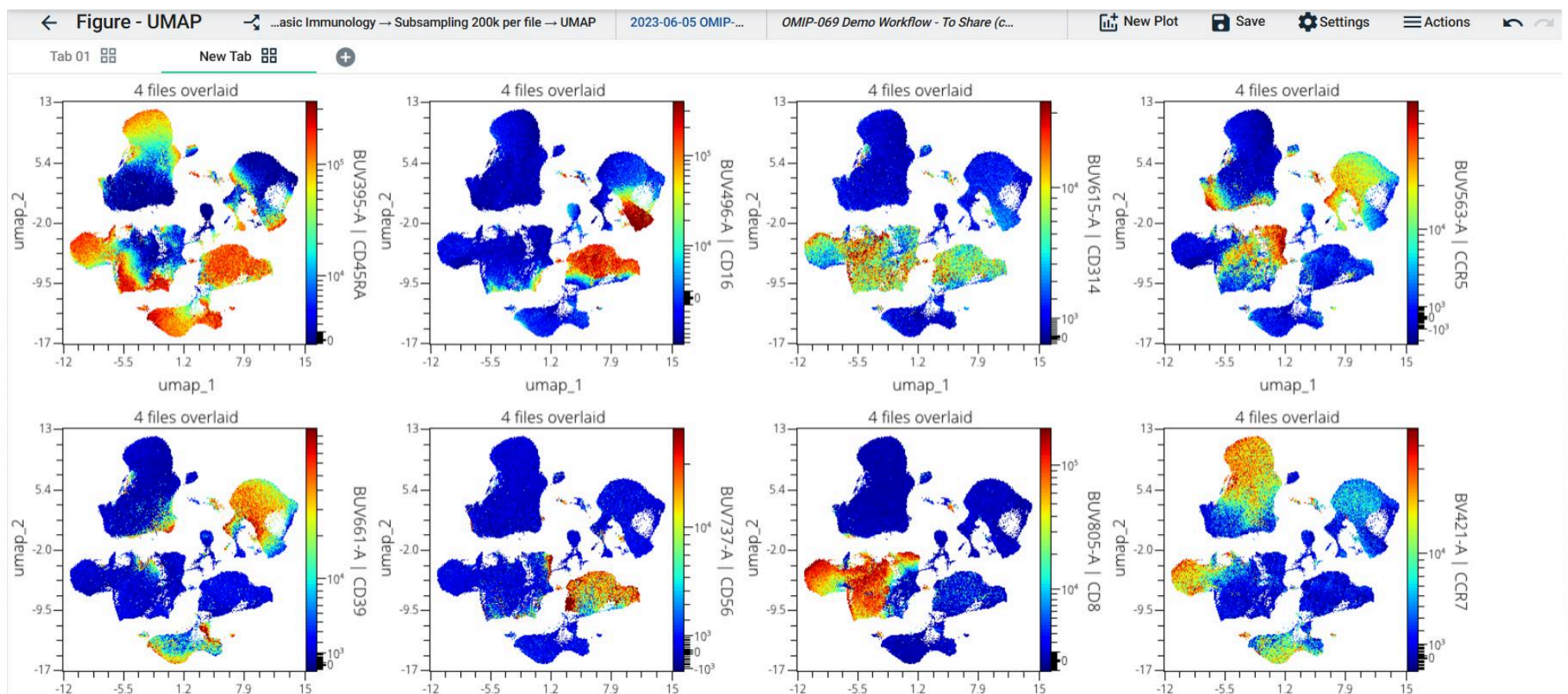
Submit

10

Add a New Task to Continue the Workflow.

- Add your next task to continue your workflow.
- You can now continue your analysis by adding any task you need.

For example, export statistics or even subsample your data ready for a Dimensionality Reduction like **t-SNE** or a clustering task like **FlowSOM**.





Frequently Asked Questions

1

How do I choose the correct value for my Scaling cofactors?

Use the **Autoscale** function (found at the top of the **Scaling** Task). This will set the cofactor of every parameter based on a template file. Choose a representative file, review the results and edit as required.

(Tip: omiq.ai/guides/understanding-data-scaling)

2

Can I have gates in different positions for different files?

Sure! If you right-click any gate you can use **Per File Mode** to set either **per file positioning**, or **per metadata positioning** for each gate.

3

How do I share my data with people?

Datasets and Workflows are private by default in OMIQ. You can manage access in the **collaborators** tab of both. To add collaborators, you first need to add them as either a **Connection** or as part of a **Group**, both found in your Profile Page.



Next Steps to Learn More

- A selection of articles on specific analysis topics, including our integration with GraphPad Prism and EasyPanel:
help.omiq.ai/
- Follow our vignette style tutorial, which walks through a typical high dimensional analysis with instructions and videos:
omiq.ai/guides/cytometry-analysis-tutorial

Contact Us

Email us at
support@omiq.ai

Visit our website
omiq.ai

