MOLECULAR DEVICES

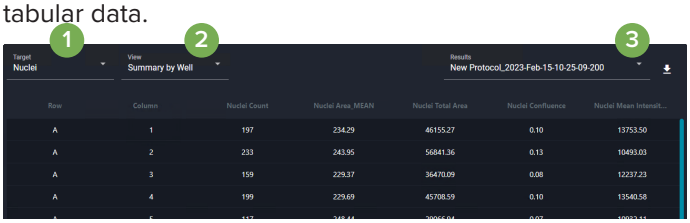
IN Carta Image Analysis Software

QUICK REFERENCE GUIDE

Viewing, Classifying, & Exporting Results

Navigating the Results Analysis Table

Use the Results Analysis Table to view analysis results as tabular data.



1. In the **Results Analysis Table** pane, use the **Target** (1) drop-down to select the target data to display.
2. Use the **View** (2) drop-down to select the aggregation method:
   - **Summary by Well**
   - **Summary by FOV**
   - **Summary by Timepoints**
   - **Single Target**
3. The **Results** (3) drop-down displays prior results for the current data set. Results are identified by protocol, data set name, and date/time. Select prior results from the drop-down to reload them.

Selecting the Chart

Use the Chart Dashboard to quickly and easily display summary or cell-by-cell data graphically.

1. In the **Chart Dashboard** pane, select the data (4) to display, either **Plate**, **Well**, or **FOV**.
2. Select the chart type (5) to display, either **Heatmap**, or **Scatter Chart, or Histogram**.

   Note: Not all chart types are available with all data.

Customizing Chart Parameters

The **Histogram** (6) is available for all data. It displays cell count for a single measure.

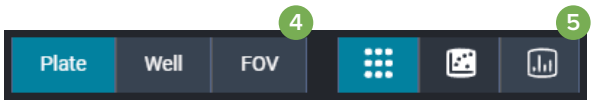
- Hover over the Histogram to display the range of each bin and the total count of objects within that range.
- Use **Target** and **Measures** drop-downs to select the data to display.
- Change **Data Bins** value to set the number of bins and adjust the size of the bins.

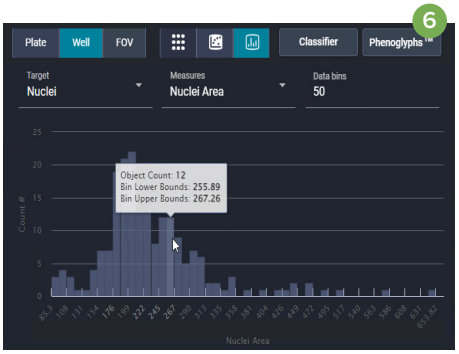
The **Scatter Plot** (7) is available for **Well** and **FOV** data. For wells, it displays data as a time-plot for a selected measure (which is useful for time-series data). For FOVs, it displays cell-by-cell data for a single FOV.

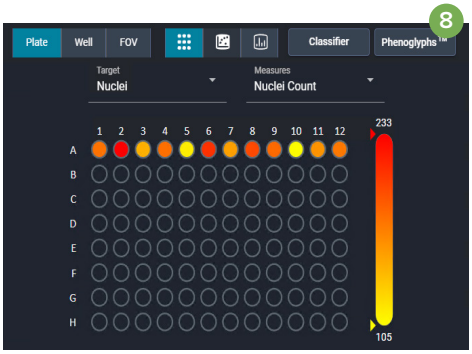
- Use **Target** and **Measures** drop-downs to select the data to be plotted on the x- and y-axes.

The **Heat Map** (8) is available for **Plate** data. It displays average data for a single measure from each well.

- Use **Target** and **Measures** drop-downs to select the data to display.
- Click and drag the arrows at the top and bottom of the **Heat Map Slider** to adjust min/max scaling.







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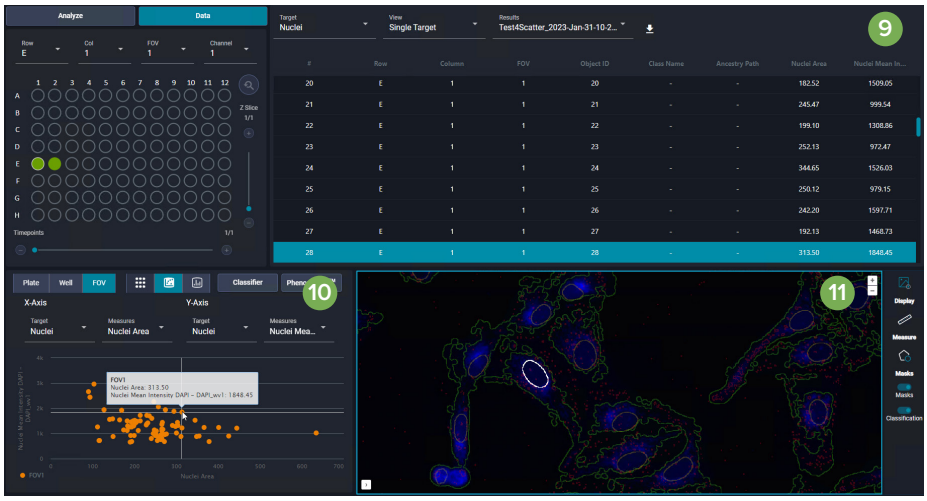
Viewing Scatter Plot Linked Data

You can link the Results Analysis Table, Scatter Chart, and Image Viewer to interactively connect data points back to a segmented object by linking. This allows you to explore outliers, trends, and perform visual quality control on analyzed data.



1. In the **Results Analysis Table** pane (9), select the **Target**.
2. In the View field, select **Single Target**.
3. In the **Chart Dashboard** pane (10), select **FOV** and **Scatter Chart**.
4. Select the **Target** and **Measures** for the x- and y-axes, as needed.
5. In the **Image Viewer** pane (11), set **Masks** to on.

After you link the data, click on a data point in the Scatter Chart or a data row in the Results Analysis Table to highlight the corresponding object in the Image Viewer.

Similarly, click on an object in the Image Viewer to highlight the corresponding data point in the scatter chart and data row in the Results Analysis Table.

Classifying Data

In the Classification window, as you add classes to the Results Histogram, the Class Navigation pane shows the relationships between parent and child classes.

1. In the **Chart Dashboard** pane (10), click **Classifier**.
2. In the **Classification** window (12), select the **Target** and **Measures** to use for classification.
3. Click **Add a class** to add a gate to the histogram. Move the gate (13), which appears as a dashed line, horizontally to reposition it. You can add up to five gates to a single node.
4. In the **Class Navigation** pane (14), hover over a class name and click **Edit** to edit the class name.
5. Double-click a class name to display a histogram for that class only.
6. If needed, click **Add a class** to add child subclasses.
7. When classification is complete, click **Save** (15) to apply the classification decision tree to the results. The classification decision tree is also added to the protocol.

Exporting Data

1. In the **Results Analysis Table** pane (9), click to open the **Download Data** window.
2. Select the **Data Type** to export, either **All Data** (export cell by cell measurements AND summary data) or **Summary** (summary data only).
3. Click **Download**. Results will be saved to the Downloads folder as a single zip file.

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June 2023 5089275 B
Printed in USA