IN Carta Image Analysis Software

View, classify and export results

Navigate the data table

- Use the **Target (1)** drop-down to select what target data to display.

- Use the **View (2)** drop-down to select the aggregation method:

  - **Single Target**: measures for each segmented object in the selected field-of-view (FOV).
  - **Summary by FOV**: average values for each FOV.
  - **Summary by Well**: average values for each well.

- 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.

Using the Chart Dashboard Panel

The **Chart Dashboard Panel** is a quick and easy way to display summary or cell by cell data graphically. Here are the most commonly used visualization tools and actions:
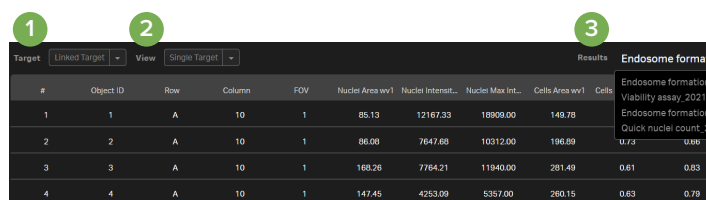
1. Use the **Data Selection (4)** buttons in the **Chart Dashboard** to view **Plate**, **Well** or **FOV** data.

2. Select the **Chart Type (5)** in the Chart Dashboard.

   Note: Not all chart types are available with all data selections. See table at bottom for more information.
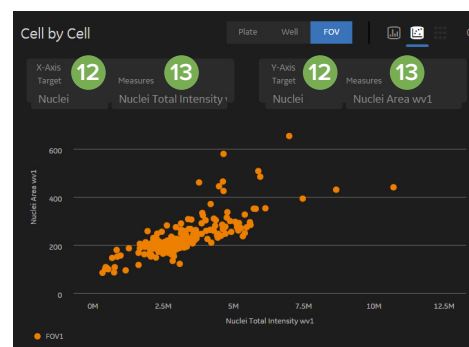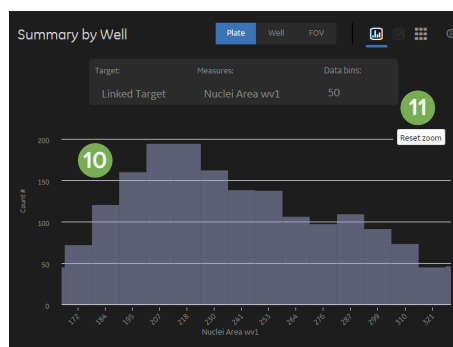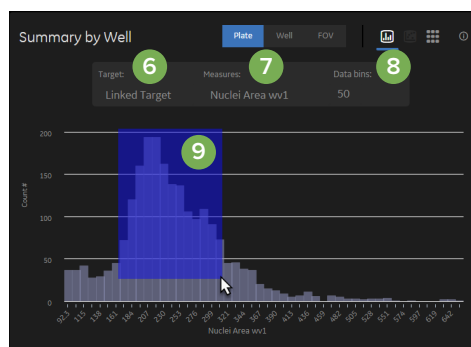
3. Select chart parameters:

   - The **Histogram** [icon] displays cell count for a single measure.

     a. Use **Target (6)** and **Measures (7)** drop-downs to change the data displayed.

     b. Adjust **Data Bins (8)** as needed. Valid entries are 1 to 99.

     c. Click and drag over an area of the histogram **(9)** to zoom in on that portion of the graph **(10)**. Click **Reset zoom (11)** to return to the default display.

   - The **Scatter Plot** [icon] displays cell by cell data for a single FOV.

     a. Use **Target (12)** and **Measures (13)** drop-downs to specify data to be plotted on the x- and y-axes.

     b. Click and drag over an area of the scatter plot to zoom in on a particular area of the graph. Click the **Reset zoom** button to return to the default display.

	[histogram icon]	[scatter icon]	[grid icon]
Plate	✓		✓
Well	✓		
FOV	✓	✓	

- The *Heat Map* ▦ displays average data for a single measure from each well.

  a. Use *Targets/Classes* and *Measures* drop-downs to change the data displayed.

  b. Click and drag the arrows at the top and bottom of the *Heat Map Slider* to adjust min/max scaling.

View linked data

IN Carta™ software enables users to interactively connect data points back to a segmented object. This allows you to explore outliers, trends, and perform visual quality control on analyzed data.

1. From the *Chart Dashboard*, set *Data Selection* to *FOV (14)* and *Chart Type* to *Scatter Plot* ▦.

2. Use drop-downs to select *Target* and *Measures (15)* for the x- and y-axes.

3. In the *Data Table*, set *Target* to *Linked Target (16)* and *View* to *Single Target (17)*.

4. Verify that the *View Port* is displaying the target identified in the *Scatter Plot* and that *Target Masks* are turned on *(18)*.

5. Click on a point in the *Scatter Plot (19)*, cell in the image *(20)*, or row in the *Data Table (21)* to highlight corresponding data for that particular object.
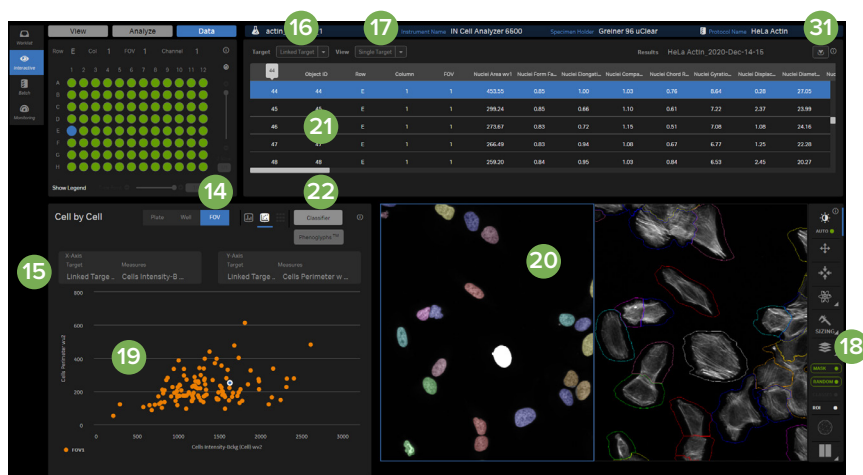
Classify data

The *Classification* window is composed of the *Classes* navigation panel *(23)* and the *Histogram (24)*. As classes are added to the *Histogram*, the *Classes* navigation panel will display relationships between parent and daughter classes.

1. From the *Chart Dashboard*, click *Classifier (22)*.

2. In the *Classification* window, select *Target (25)* and *Measures (26)* to use for classification.

3. Click the *+* *(27)* icon to add a gate to the histogram. Move the gate *(28)* horizontally to reposition. Up to five gates can be added to a single node.

4. In the *Classes navigation panel*, click on the *Pencil* icon to edit parent and daughter class names.

5. Double-click a node *(29)* in the *Classes navigation panel* to reload the histogram for that class alone. Use the *+* *(27)* icon to add daughter classes for this node.

6. When classification is complete, click *Save (30)* to classify data.

Export Measurements

1. Click on *Download Results* ✉ *(31)* in the upper right hand corner of the data table panel.

2. In the *Download Data* window, choose the *Data Type* to export.

   - *All Data* will export cell by cell measurements AND summary data.

   - *Summary* will export only summary data (FOV and whole well averages).

3. Click *Download*. Results will be saved to the Downloads folder as a single zip file.