

Guide to Creating the Polygon Region of Interest (ROI)

The polygon ROI supports the following interactivity, including keyboard shortcuts. Notes especially important to the `musc_thresh.m` program are **highlighted** or **color-coded**.

Behavior	Keyboard Shortcut
Finish Drawing (Close) the ROI	<ul style="list-style-type: none"> ❖ Position the pointer over the first vertex and click. ❖ Double-click. Adds a new vertex at the pointer position and draws a line to the first vertex to close the polygon. ❖ Press Enter. Adds a new vertex at the pointer position and draws a line to the first vertex to close the polygon. ❖ Right-click. Does not add a new vertex but closes the polygon from the previous vertex.
Add a New Vertex to the ROI	<ul style="list-style-type: none"> ❖ Position the pointer over the edge of the ROI, right-click, and select Add Vertex from the context menu. ❖ Position the pointer over the edge of the ROI and double-click. (WILL ALSO FINISH DRAWING THE ROI)
Remove the Most Recently Added Vertex but Keep Drawing	<ul style="list-style-type: none"> ❖ Press Backspace. The function redraws the line from the previous vertex to the current position of the pointer. You can only back up to the first vertex you drew.
Resize (Reshape) the ROI CAN ONLY DO THIS ONCE THE POLYGON IS CLOSED!	<ul style="list-style-type: none"> ❖ Position the pointer over a vertex and then click and drag. ❖ Add a new vertex to the polygon and then click and drag. ❖ Remove a vertex. The ROI redraws the line connecting the two neighboring vertices.
Cancel Drawing the ROI PLEASE DO NOT DO THIS!	<ul style="list-style-type: none"> ❖ Press Esc. The function returns a valid ROI object with an empty Position field. <p>You will have to start the program over! Please do NOT press Esc!</p>
Delete the ROI PLEASE DO NOT DO THIS!	<ul style="list-style-type: none"> ❖ Position the pointer on the ROI, right-click, and choose Delete Polygon from the context menu. <p>You will have to start the program over! Please do NOT delete the ROI!</p>

For further help, look at *help images.roi.Polygon* or *help drawpolygon* on MATLAB or online at <https://www.mathworks.com/help/images/ref/images.roi.polygon.html>

Notes:

1. The cursor changes to a circle near a vertex to allow for repositioning or deleting that vertex.
2. A right click brings up a menu for adding/deleting vertices (and the ROI).