



















Supplementary Note 1: caDNAno Tool Button Reference




Slice Panel Buttons

icon	name	function
	Edit Tool	<b>Click</b> a helix in the Slice Panel to add scaffold at the current position of the Slice Bar. <b>Shift+Click</b> an existing helix to add staple sequence at the current position of the Slice Bar.
	Zoom Tool	<b>Click</b> to zoom in. <b>Shift+Click</b> to zoom out.
	Move Tool	<b>Click+Drag</b> to reposition the Slice helices.
	First-Slice Button	<b>Click</b> button to move Slice Bar to left-most position.
	Last-Slice Button	<b>Click</b> button to move Slice Bar to right-most position.
	Renumber Button	<b>Click</b> button to renumber helices according to their current order in the Path panel.

Path Panel Buttons

icon	name	function
	Edit Tool	<b>Click</b> on a crossover to add or remove. <b>Click+Drag</b> on a breakpoint to reposition. <b>Shift+Click</b> on one of two adjacent breakpoints to ligate a nick. <b>Alt+Click</b> on a breakpoint to move breakpoint to its boundary. <b>Alt+Shift+Click</b> on Slice Bar to move all breakpoints to their respective boundaries.
	Zoom Tool	<b>Click</b> to zoom in. <b>Shift+Click</b> to zoom out.
	Move Tool	<b>Click and Drag</b> to reposition the Path canvas. Tip: use <b>arrow keys</b> ← ↑ ↓ → to avoid switching back and forth to this tool.
	Break Tool	<b>Click</b> to install a 3' nick in scaffold or staple.
	Erase Tool	<b>Click</b> to remove continuous stretch of scaffold or staple (up to any breakpoint or crossover).
	Force Crossover Tool	<b>Click</b> to once to select start position, then <b>click</b> again to select end position. Confirm in dialog box to install a non-standard crossover.
	Loop Tool	<b>Click</b> on a scaffold strand to install a loop, which causes extra scaffold (and optionally staple) bases to be included at a that position. <b>Click</b> on a staple strand to install a specific sequence. <b>Double-Click</b> with <u>Edit Tool</u> to remove a loop.
	Skip Tool	<b>Click</b> on a scaffold position to install a "skip", which causes scaffold and staple sequence to not be installed at the specific position. <b>Double-Click</b> with <u>Edit Tool</u> to remove a skip.
	Paint Tool	<b>Click</b> on a staple to set to selected color. Use color picker to select specific a color. Use keyboard shortcut " <b>p</b> " to cycle through colors.
	AutoStaple Button	<b>Click</b> to install a default set of staples. It is best to complete the scaffold design before using the AutoStaple button. Note: Staples can be installed manually using the <u>Slice Panel Edit Tool</u> .
	Add Sequence Tool	<b>Click</b> on a <u>scaffold 5' breakpoint</u> to apply a scaffold sequence to a design. Sequences are <b>not</b> currently stored, so this tool must be used whenever an existing design is loaded. M13 scaffold hairpins are highlighted when sequence is applied.
	Export SVG Button	<b>Click</b> to export an SVG diagram of the path panel. Sequences will be included if previously applied with the <u>Add Sequence Tool</u> .

Render3D Panel Buttons

icon	name	function
	Zoom Button	<b>Click</b> to zoom in. <b>Shift+Click</b> to zoom out.
	Move Tool	<b>Click+Drag</b> to reposition the 3D model. <b>Unselect</b> the tool to return to Examine mode.
	X3D Export Button	<b>Click</b> to export an X3D cylinder model of the scaffold arrangement.

Notes

- **Click** always refers to a Left-Mouse-Button click.
- Buttons are clicked for use, while Tools must be selected before use in their appropriate panel.