

# Primer3

The *Primer3* plugin is a port of the [Primer3 tool](#). It is intended to pick primers from a DNA sequence.

To use the *Primer3*, open a DNA sequence and select the *Analyze Primer3* context menu item. The dialog will appear:

The image shows a screenshot of the 'Primer Designer' dialog box. It has a title bar with a question mark and a close button. Below the title bar is a tabbed interface with tabs for 'Main', 'General Settings', 'Internal Oligo', 'Penalty Weights', 'RT-PCR', 'Sequence Quality', and 'Result Settings'. The 'Main' tab is selected. Inside the 'Main' tab, there are several input fields and checkboxes. At the top, there are 'Excluded regions' and 'Targets' text boxes. Below these is a 'Product size ranges' section with a list of ranges (150-250, 100-300, 301-400, 401-500, 501-600, 601-700, 701-850, 851-1000) and a 'Mispriming/Repeat library' dropdown set to 'NONE'. The next section contains several numeric input fields with up/down arrows: 'Number to return' (5), 'Max 3' stability' (9.00), 'Max repeat mispriming' (12.00), 'Pair max repeat mispriming' (24.00), 'Max template mispriming' (12.00), and 'Pair max template mispriming' (24.00). There is also a 'Start codon position' text box. Below these are three checkboxes: 'Pick left primer' (checked), 'Pick hybridization probe (internal oligo)' (unchecked), and 'Pick right primer' (checked). Each checkbox has a corresponding text box below it for the primer sequence. At the bottom of the dialog, there is a 'Region' dropdown set to 'Whole sequence', a '1 - 199950' range indicator, a 'Help' button, and three buttons on the right: 'Save settings', 'Load settings', 'Reset form', and 'Pick primers'.

All available parameters are the same as in the original Primer3.

However there is one additional feature available which is not originally a part of [Primer3 tool](#). It allows user design primers for RT-PCR experiments by choosing which exons/introns to span with the primer product. This feature is described in detailed below. When you select the parameters you can save and load settings with a help of the corresponding buttons in the right corner of the dialog.

- [RT-PCR Primer Design](#)