

# 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 active. Inside the dialog, there are several input fields and controls: 'Excluded regions' (a text box), 'Targets' (a text box), 'Product size ranges' (a list of ranges: 150-250, 100-300, 301-400, 401-500, 501-600, 601-700, 701-850, 851-1000), and 'Mispriming/Repeat library' (a dropdown menu set to 'NONE'). There are also 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). A 'Start codon position' text box is also present. 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 primer or probe sequences. At the bottom, there is a 'Region' dropdown set to 'Whole sequence', a range input '1 - 199950', and a 'Help' button. On the right side of the bottom are four buttons: '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.

- [RTPCR Primer Design](#)