

## In Silico PCR

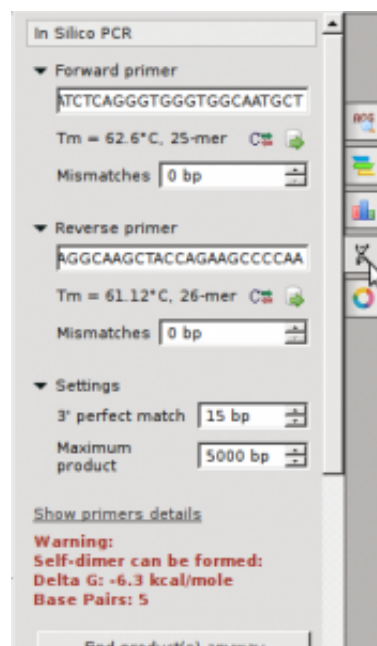
Using the primer sequences, one can determine the size and/or location of a PCR product. This can be done using BLAST or with a program like UGENE.

### Using BLAST

1. Primers for the PV92 insertion
  - Forward primer: 5' GGATCTCAGGGTGGGTGGCAATGCT 3'
  - Reverse primer: 5' GAAAGGCAAGCTACCAGAAGCCCCAA 3'
2. Visit BLAST: [https://blast.ncbi.nlm.nih.gov/Blast.cgi?PAGE\\_TYPE=BlastSearch](https://blast.ncbi.nlm.nih.gov/Blast.cgi?PAGE_TYPE=BlastSearch)
3. Paste both primers:
  - GGATCTCAGGGTGGGTGGCAATGCTGAAAGGCAAGCTACCAGAAGCCCCAA
  - Remove the 5' and 3' numbers
4. Choose **"Somewhat Similar"**
  - Locate the locus of the product and the size

### Using Ugene

1. Exercise using the human D-Loop Primers
  - Forward Primer 5'-TTAACTCCACCATTAGCACC-3'
  - Reverse Primer 5'-GAGGATGGTGGTCAAGGGAC-3'
2. Download the sample Genbank file: [Human Mitochondrial Genome](#)
3. Open the file in Ugene
4. Select the **"In Silico PCR"** button on the far right (double helix button)
  - insert forward and reverse primers in appropriate spaces



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5. A PCR product should be noted for one of the sequences after pressing “**Find Products anyway**”