

Lasergene[®]

PrimerSelect

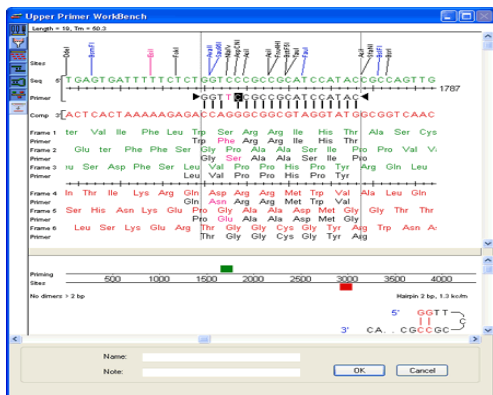
OLIGONUCLEOTIDE DESIGN AND ANALYSIS

PrimerSelect's comprehensive set of tools enables you to design and analyze primers for PCR, sequencing, probe hybridization, transcription analysis or PCR/cloning. Enter your own primers or let PrimerSelect generate a sorted list of suggested primers for all or part of your DNA, RNA or back-translated protein template. You can accept PrimerSelect's top choice, evaluated on the thermodynamic properties for annealing reactions, or view all of the options and choose alternatives based on your specialized knowledge. PrimerSelect includes the WorkBench where you preview the effects your edits will have on reading frames and restriction sites. PrimerSelect further assists you by highlighting potential pitfalls in both standard and multiplex PCR experiments via illustrations, graphs and statistical reports. These tools enable you to limit investment in time-consuming and costly experiments to those that have the highest probability of success. PrimerSelect even lets you perform BLAST or Entrez text searches and load sequences directly from NCBI's databases

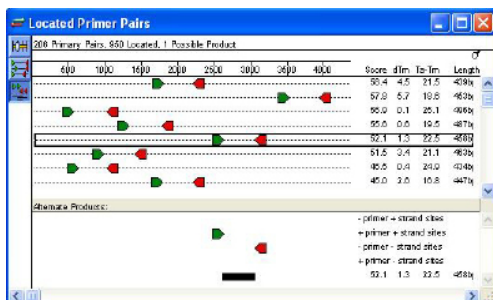
MAIN PrimerSelect WINDOW



PrimerSelect FEATURES



Add restriction sites or make edits to primers in the workbench



Select a primer pair from the alternatives provided

Sequence Entry

- Import data from many popular file formats
- Read sequences and features from other Lasergene project files
- Download sequences directly from NCBI using accession numbers, BLAST, or text searches

Customize Primer Design and Editing

- Adjust parameters such as primer and product length, primer locations, Tm, hairpins or use the default settings
- Edit template sequence and share newly created features through integration with SeqBuilder and other Lasergene modules
- Determine the best primer pairs or best probes for varied conditions
- Analyze existing primers and create a primer catalog
- Create degenerate, inosine-containing and "best guess" primers from ambiguous templates
- Utilize any of the 14 genetic codes supplied or create your own
- View the effects on restriction sites and translations when editing primer sequences
- Select from a list of alternative codons for silent mutations or specific residue changes

Graphical and Tabular Displays

- Quickly spot mis-priming sites and unwanted products
- Generate color-coded, graphical overviews of primer options and their locations
- Choose an overview of primers located on your template or view the sequence at base level with graphs of Tm and ΔG on both strands
- See major and alternate PCR product sizes simultaneously
- View sequences and structures of hairpins and primer-dimers
- View primers and restriction maps, reading frames, and translations
- Analyze tables of amplification details, primer base compositions, primer lengths, Tms and ΔG s.