



Retrieves batches of sequences directly into the program from GenBank.

Performs BLAST search and avoids cross homologies while designing primers.

Supports Local and Desktop BLAST options for using local custom/unpublished databases.

Includes a sequence view with primers marked on it.

Calculates Tm using nearest neighbor thermodynamic theory and highly accurate SantaLucia values.

Exports a publication quality report for the assays designed for sharing with colleagues.

Organizes data in project format and maintains a local database of sequence information and search results.

Supported on latest operating system, Windows 7.

LAMP Designer

Design primers for Loop-Mediated Isothermal Amplification

LAMP Designer designs efficient primers for Loop-Mediated Isothermal Amplification assays, that amplify DNA and RNA sequences at isothermal conditions, eliminating the necessity of a PCR setup. The technology relies on auto-cycling and DNA polymerase mediated strand displacement DNA synthesis, amplifying a few copies of DNA to 10⁹ in less than an hour. Reverse transcription coupled LAMP can be applied for amplification of RNA sequences.

The screenshot shows the LAMP Designer software interface. On the left, a 'LAMP Assay Design' panel displays search parameters and primer properties. On the right, a 'Multiplex Primers' panel lists the four primers (F1c, F1b, B1c, B1b) with their sequences and melting temperatures (Tm). Below this, a 'BLAST Information' panel shows a list of BLAST search results for various accessions, including their lengths, Tms, GC%, and E-values. A 'Sequence Information' panel at the bottom shows a sequence with highlighted primers.

LAMP employs four specially designed primers (two inner and two outer) that recognize six distinct regions in the target DNA. Hybridization of the four primers to the target DNA is a very crucial step for the efficiency of LAMP. The design of these four primers is therefore critical for a successful assay.

Avoid Cross Homologies

LAMP Designer automatically interprets BLAST search results and avoids those regions to design primers that have significant cross homologies with the database.

Verification BLAST

The primers can be BLAST searched against a database to verify their specificity.

Multiplex LAMP Primer Set

The primers designed for a sequence can be checked for multiplexing. The free energies of the most stable cross homologies between the primers designed, is displayed by the program.

Export Result

The designed primer sets, along with their properties, can be exported in standard csv or excel formats.

Data & Database Management

Multiple projects can be created. Data of multiple experiments can be easily managed by creating a separate project for each experiment. It maintains a local database for sequence information and search results.

To activate & evaluate, follow these steps

- Install LAMP Designer from our website or the CD
- Launch the program and click 'Activate' on the first window
- Enter the 'Registration Number' requested from us and your e-mail address. Click 'Next'
- Update the registration information following the on-screen prompts and click 'Submit'

For a quick start

- Check the Multimedia Tutorial

Order on-line

- E-mail: sales@premierbiosoft.com
- Phone: 650-856-2703, Fax: 650-618-1773

Bioinformatics Services

PREMIER Biosoft has a successful record of software development in bioinformatics molecular biology since 1994. Our software products have been well received by the life science community over these years. We specialize in software development, design, testing and maintenance. If you have a new requirement or need the upkeep of a current database/software system, our team of bioinformatics scientists and computer professionals can assist.

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A comprehensive tool designed to address the challenges of species identification & taxa discrimination using qPCR, xMAP® and microarrays. (for Win & Mac)

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For fast and efficient design of specific oligos for whole genome arrays, tiling arrays and resequencing arrays. (for Win & Linux)

Beacon Designer™

Design specific and efficient oligos for all major qPCR assays. (for Win & Mac)

LAMP Designer

Design primers for Loop-mediated Isothermal Amplification. (for Win)

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MLPA® Designer

A comprehensive tool co-developed with MRC-Holland to design highly specific oligos for MLPA assays. (for Win & Mac)

PrimerPleX

A multiplex PCR primer design tool. (for Win & Mac)

Primer Premier

A comprehensive primer design tool for standard PCR assays. (for Win and Mac)

PROTEOIQ

Right from validation to quantification, a powerful software that supports the entire proteomic data analysis pipeline. (for Win & Mac)

SimGlycan®

High throughput glycan & glycopeptide identification tool for data from TripleTOF, MALDI TOF/TOF, LC-MS/MS systems. (for Win)

SimLipid®

High throughput lipid characterization tool for data from Triple TOF, MALDI TOF/TOF, LC-MS, LC-MS/MS systems. (for Win)

SimMet®

A robust high throughput informatics software for qualitative and quantitative analysis of mass spectrometry metabolite data. (for Win)

SimVector

A tool for drawing publication, vector catalog quality maps & designing cloning experiments. (for Win & Mac)

Xpression Primer

A novel tagged primer design tool for expression cloning and for designing sequencing primers to verify transcripts. (for Win & Mac)