

Beacon Designer

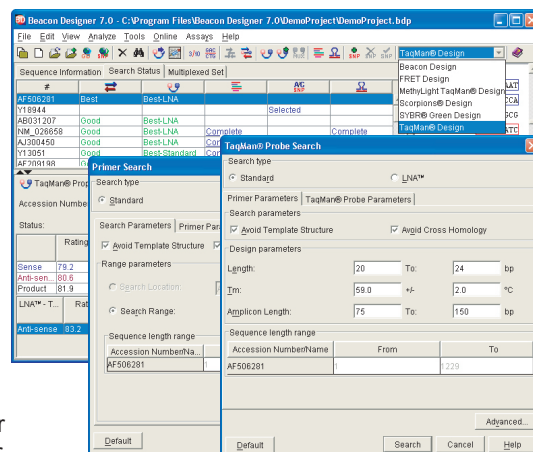
Design SYBR® Green primers, TaqMan® probes, MethyLight TaqMan® probes, LNA spiked TaqMan® probes, Scorpions®, FRET probes or molecular beacons for robust amplification and fluorescence in real time PCR

Optimal SYBR® Green Primer Design

Use Beacon Designer to design highly specific and efficient SYBR® Green primers. Specificity is assured by avoiding significant cross homologies identified by automatically interpreting BLAST search results. To assure efficient hybridization and high yield, the program avoids template secondary structures for locating primers. The template is folded by connecting to the Mfold server.

Dual Labeled Probe Design

Beacon Designer offers comprehensive support for designing TaqMan®, molecular beacon, Scorpions® and FRET assays for studying differential gene expression or detecting SNPs using single template or multiplex reactions. You can even confirm SYBR® Green assay results by designing probes compatible with previously designed primer pairs for any of these techniques. Or simply evaluate partially or fully pre-designed assays using instant analysis capabilities of Beacon Designer.



Design SYBR® Green primers, TaqMan® probes, MethyLight TaqMan® probes, LNA™ spiked TaqMan® probes, Scorpions®, FRET probes & molecular beacons free of secondary structures for increased signal strength

Evaluate pre-designed probes, primer pairs and beacon or TaqMan® probes

Tm calculated using nearest neighbor thermodynamic theory and highly accurate SantaLucia values

Design compatible primers for other targets in multiplex reactions

Views the location of primers and probes on the sequence and check for all possible structures

Retrieve sequence from Entrez and dbSNP and perform BLAST search

Load SNP using GenBank or add your own SNP information

Export results in a tab delimited format for easy ordering or for importing into central databases like Oracle

Ability to generate an attractive report of the designed assays

Local built-in database maintains sequence information, search results and BLAST result summaries

Strong web integration

Available for Windows and Mac

Design Multiplex Assays

Beacon Designer uses innovative proprietary algorithms to design optimal primer-probe sets for single tube multiplex assays. You can choose the set best suited for your experimental needs from a list of alternates presented in variously sortable order. If you want to incorporate well-proven sets for some of the templates, or include reference or housekeeping genes for normalization purposes in the assay, Beacon Designer is equipped to fully support your needs.

LNA™, MethyLight, NASBA® & Scorpions® Assays

Design the increasingly popular Locked Nucleic Acid (LNA™) substituted TaqMan® probes, which are more stable than standard probes. TaqMan® probes can also be designed for MethyLight assays. MethyLight is a high throughput assay used to discriminate between methylated and unmethylated DNA. Nucleic acid sequence-based amplification (NASBA®) is a primer-dependent technology that can be used for the continuous amplification of nucleic acids in a single mixture at one temperature. You can now design molecular beacons for NASBA® assays for single template or multiplex reactions. Design Scorpions® to achieve sequence-specific priming and PCR product detection using a single oligonucleotide.

Intuitive Interface

All the information is displayed in a simple and succinct format. The program displays in a graphical format the locations of the primers and probes, all possible dimers, cross dimers, repeats and runs. You can generate an attractively formatted report for your lab notebook or for sharing notes with your colleagues.

Activate for evaluation following these steps

- Install and launch Beacon Designer from the CD
- Click **Evaluate** on the first window that opens
- Enter the evaluation key requested from us

Learn to use Beacon Designer

- Beacon Designer Multimedia Tutorial is included on the CD

Order on-line

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

Other bioinformatics tools from Premier Biosoft International

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