DNASTAR®
Software for life scientists

DNASTAR Lasergene Version Comparison

LASERGENE® Molecular Biology Suite

	13	14	15.1
Cloning, Primer Design, and Gene Detection			
Automated clone verification workflow			•
Batch sequence editing built-in to SeqBuilder Pro			•
New SeqBuilder Pro application for sequence editing and analysis			•
Quick search and selection of enzymes			•
Collapsible and sortable feature and primer lists			•
Auto-arrangement for large groups of enzymes on plasmid maps			•
Improved handling of large sequence files			•
Plasmid auto-annotation (single or batch) using curated database		•	•
Streamlined setup and reports for virtual cloning		•	•
InFusion, GeneArt and Gibson Assembly cloning methods		•	•
Automated virtual cloning: site-directed, TA, TOPO, Gateway, Gateway MultiSite	•	•	•
Design customized primer pairs	•	•	•
Pairwise and Multiple Sequence Alignment			
Copy, export, and align subsets of sequences			•
Import gapped FASTA alignments			•
Export editable images to PowerPoint		•	•
Faster navigation through history tracking and favorites		•	•
Improved selection feedback and details view		•	•
Profile alignment functionality to merge alignments or additional sequences	•	•	•
MAFFT, MUSCLE, Mauve, and Clustal Omega alignment algorithms	•	•	•
Align sequences, create phylogenetic trees, and apply bootstrapping	•	•	•
BLAST and Entrez Capabilities			
BLAST and Entrez search support	•	•	•
BLAST multiple contigs simultaneously	•	•	•

DNASTAR Cloud

	13	14	15.1
DNASTAR Software on the Amazon Cloud			
NovaDock® and NovaFold® Antibody on the Cloud			•
NovaFold® on the Cloud for quick protein structure predictions on the fly		•	•
Multiple parallel assemblies on the cloud	•	•	•
Fast and secure cloud data transfer and storage	•	•	•

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608.258.7420 tel
866.511.5090 toll free

0.808.234.1643 U.K.
0.800.182.4747 Germany

3801 Regent Street
Madison, WI 53705

info@dnastar.com
www.dnastar.com

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Lasergene
Version Comparison

LASERGENE®
Genomics Suite

	13	14	15.1
Next-Gen Sequence Assembly and Alignment			
Improved handling of GFF files			•
Advanced mRNA isoform visualization and analysis		•	•
Combined analysis for any data type and any number of assemblies		•	•
Visualization, browsing and multi-sample comparison in GenVision Pro		•	•
rRNA and contaminant screening and adapter trimming		•	•
RNA-Seq analysis for non-model organisms	•	•	•
De novo assembly for any size transcriptome on a desktop computer	•	•	•
Automatic mRNA annotation using RefSeq	•	•	•
Gene panel workflows with control validation	•	•	•
Metagenomic assembly and analysis	•	•	•
Reference-guided assembly for any size genome on a desktop computer	•	•	•
De novo genome assembly	•	•	•
Variant Detection and Analysis			
Combine variant and PDB annotations to predict potential effects on protein structure			•
Enhanced read mapping option to reduce false positives			•
Combine SNP and CNV analysis with any workflow		•	•
Human Variant Annotation Database for functional analysis of mutations	•	•	•
Access to allele and genotype frequencies for SNPs	•	•	•
SNP detection accuracy >99.8%	•	•	•
Import and filter on VCF files and custom SNP data	•	•	•
Linkage to dbNSFP Gene database	•	•	•
Direct comparison to dbSNP and GERP databases	•	•	•

LASERGENE®
Structural Biology Suite

	13	14	15.1
Macromolecular Structure, Motion, and Function			
Mutation modeling to show individual amino acid impact on protein structure			•
Protean 3D full integration with all NovaCloud applications			•
Full feature editing capabilities in Protean 3D			•
Export editable images to PowerPoint and PDF			•
NovaDock® protein-protein docking, analysis and visualization		•	•
NovaFold Antibody structure prediction		•	•
Protein function and ligand binding site prediction	•	•	•
B-cell epitope prediction	•	•	•
Align experimental structures and templates with predicted models	•	•	•