DNASTAR® Software for life scientists

Lasergene Version Comparison

LASERGENE®			
Molecular	Biology	Suite	

13 14 1	5.3
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•			
Cloning, Primer Design, and Gene Detection			
Agarose gel simulation in SeqBuilder Pro			•
Automated clone verification workflow			٠
Batch sequence editing built-in to SeqBuilder Pro			٠
New SeqBuilder Pro application for sequence editing and analysis			٠
Quick search and selection of enzymes			٠
Collapsible and sortable feature and primer lists			٠
Improved handling of large sequence files			٠
Plasmid auto-annotation (single or batch) using curated database		•	٠
Streamlined setup and reports for virtual cloning		•	٠
InFusion, GeneArt and Gibson Assembly cloning methods		٠	٠
Automated virtual cloning: site-directed, TA, TOPO, Gateway, Gateway MultiSite	•	•	٠
Design customized primer pairs	٠	٠	٠
Pairwise and Multiple Sequence Alignment			
Comprehensive pairwise alignment in MegAlign Pro, powered by ParaSail			٠
Copy, export, and align subsets of sequences			•
Import gapped FASTA alignments			•
Export editable images to PowerPoint		•	•
Faster navigation through history tracking and favorites		•	•
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	٠	•	•
BLAST and Entrez Capabilities			
BLAST and Entrez search support	•	•	•
BLAST multiple contigs simultaneously	•	٠	٠
	10		150
	13	14	15.3
DNASTAR Software on the Amazon Cloud			
Multi-sample NGS Assemblies on the DNASTAR Cloud			•
NovaDock® and NovaFold® Antibody on the Cloud			•
NovaFold® on the Cloud for quick protein structure predictions on the fly		٠	•

Fast and secure cloud data transfer and storage



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Genomics Suite	13	14	15.3
Next-Gen Sequence Assembly and Alignment			
Enhanced RNA-Seq statistics with DESeq			•
Improved handling of GFF files			•
Advanced mRNA isoform visualization and analysis		•	•
Combined analysis for any data type and any number of assemblies		٠	•
Visualization, browsing and multi-sample comparison in GenVision Pro		٠	•
rRNA and contaminant screening and adapter trimming		٠	•
RNA-Seq analysis for non-model organisms	•	•	•
Automatic mRNA annotation using RefSeq	•	•	•
Gene panel workflows with control validation	•	•	•
Metagenomic assembly and analysis	•	٠	٠
Reference-guided assembly for any size genome on a desktop computer	•	٠	٠
De novo genome and transcriptome assembly	٠	٠	٠
Variant Detection and Analysis			
Combine variant and PDB annotations to predict potential effects on protein structure			٠
Enhanced read mapping option to reduce false positives			٠
Combine SNP and CNV analysis with any workflow		٠	٠
Human Variant Annotation Database for functional analysis of mutations	•	•	٠
Access to allele and genotype frequencies for SNPs	٠	٠	٠
SNP detection accuracy >99.8%	٠	٠	٠
Import and filter on VCF files and custom SNP data	•	•	•
Linkage to dbNSFP Gene database	٠	٠	٠
Direct comparison to dbSNP and GERP databases	٠	٠	٠
Structural Biology Suite	13	14	15.3

Silucioral biology solle	13	14	15.3
Macromolecular Structure, Motion, and Function			
Mutation modeling and neighbor search to analyze SNP impact on protein structure			٠
Protein composition analysis in Protean 3D			٠
Full feature editing capabilities in Protean 3D			٠
Export editable images to PowerPoint and PDF			٠
NovaDock [®] protein-protein docking, analysis and visualization		٠	٠
NovaFold Antibody structure prediction		•	•
Protein function and ligand binding site prediction	٠	٠	٠
B-cell epitope prediction	•	•	٠
Align experimental structures and templates with predicted models	٠	٠	٠