

MacVector 18.5.0

for Mac OS X

The online updater for this release is 224 MB in size

You must be running MacVector **15.5.4** or later for this updater to work!

If the updater fails, [DOWNLOAD THE FULL INSTALLER HERE!](#)

System Requirements

MacVector 18.5 is a Universal Binary supported on any Intel or Apple Silicon Macintosh running **Mac OS X 10.12** (macOS Sierra) or higher, up to and including macOS Monterey. There are no other specific hardware requirements for MacVector – if your machine can run OS X 10.12 or above, it can run MacVector. A complete installation of MacVector 18.5 uses approximately 496 MB of disk space. Please note this release will NOT run on OS X 10.11 or earlier versions of OS X.

ASSEMBLER NOTE: If you are performing contig assembly using *MacVector with Assembler*, we recommend you have **at least** 2 GB of **FREE** RAM available on your machine. For any serious NGS work using phrap, velvet, SPAdes, Flye or bowtie, you should have at least 8 GB and preferably 16 GB or more for satisfactory performance.

Installation and License Activation

You can choose to install MacVector in one of two ways; if you want to install MacVector for all users of the computer, simply drag the MacVector folder onto the Applications folder. You will be prompted for a system administrator account and password during this copy. If you don't have administrative privileges, or if you want to install it for just your own use, you can install MacVector in the /Applications/ folder in your own personal home directory. To do that, double-click on the **OpenUserApplicationsFolder** icon to open the folder in a separate window, then drag the MacVector folder into that window.

When you first run MacVector, you must enter a valid license owner, serial number and activation code if one does not already exist on your computer. This information is usually sent by e-mail but is also printed on the inside of the CD sleeve if you opted to receive MacVector on physical media. If you previously installed an earlier version of MacVector and have a serial number with a maintenance end date of November 1st 2022 or later, MacVector 18.5 will automatically use your existing license and you will not be required to enter the details again. NOTE: you can optionally activate a license for your own use without requiring Administrative privileges.

Changes for MacVector 18.5

Heterozygote Analysis

There is a new heterozygote analysis function that scans Sanger sequencing chromatogram files for potential mixed residues. It uses a custom algorithm that considers the overlap with surrounding residue peaks to isolate the signal for each track and more accurately identify true mixed residues from background noise. It can be invoked from the single chromatogram (“*Trace*”) window, the *Align to Reference* window, or the *Assembly Project* window, allowing you to run the analysis on a single file, or potentially on thousands of files in a project.

Hotlinks in the text output let you quickly jump to any individual potential heterozygote in the original chromatogram. In the case of *Assembly Projects*, the individual chromatogram will be opened in a separate window. *Align to Reference* and *Trace* windows simply scroll to the highlighted residue.

Heterozygote Basecall

Based on the heterozygote analysis algorithm described above, a distinct “base call” variant lets you look for heterozygotes and *Apply* them to the scanned sequences, changing the sequences and replacing the heterozygote locations with the appropriate IUPAC ambiguity code. Of course, it lets you review the results and approve them before changing any sequences.

Miscellaneous Enhancements and Bug Fixes

The ability to read Sequencher Project (.SPF) files has been improved.

In the *Align to Reference Editor*, the 3/6 frame translations now extend beyond the ends of the reference sequence if the aligned consensus sequence is longer than the reference.

Flye has been updated to version 2.9.1 and now uses Python 2.9 for improved performance.

Various sheets and dialogs have been cleaned up to allow for the different fonts and spacing in macOS Ventura

Enable Mixed Case Entry is now enabled as expected.

Auto-annotation jobs that fail are now cleaned up correctly so that they can be re-run without needing to exit MacVector.

A rare Multiple Sequence Alignment error where ClustalW would fail to run has been resolved.

A rare MSA crash bug has been fixed.

The Primer3 implementation now supports the primer_max_end_gc variable.

Improved the import of subsequence data to handle very short subsequences.

Support information

For assistance with MacVector, please contact your local MacVector, Inc office. You will need a current MacVector maintenance contract to be eligible for technical support other than for basic installation or licensing problems. New sales of MacVector include 12 months of support that also entitles you to any upgrades to MacVector released during the maintenance period.

USA

Toll Free: (866) 338 0222

Telephone: (919) 303 7450

Fax: (919) 303 7449

E-mail: support@macvector.com

Europe

Telephone: + 44 (0)1223 410552

Fax: +44 (0)1223 709429

E-mail: support@macvector.com

Worldwide

Telephone: + 1 919 303 7450

E-mail: support@macvector.com

When contacting Customer Support with a technical problem, please be prepared to give your product serial number as well as a detailed description of your problem and any error messages you encounter. Visit the MacVector Web site for details of any available updates, and any relevant information that could not be added to these release notes in time for publication:

<http://www.macvector.com>

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