

Cogent™ NGS Immune Profiler v1.6 and Cogent NGS Immune Viewer v1.0 Quick Start Guide

The following information is provided as a high-level introduction to the software. For more detailed information, please see the [Cogent NGS Immune Profiler v1.6 User Manual](#) and the [Cogent NGS Immune Viewer v1.0 User Manual](#).

NOTE: Refer to the "Immune profiling kit compatibility" on the [bioinformatics portal](#) to view supported chemistries.

Before You Begin (Immune Profiler)

A. Review the [End User License Agreement](#)

IMPORTANT: See note on page 2 of this document.

B. Supported operating systems

- Mac OS X: El Capitan (Version 10.11 and up)
- Linux: CentOS 6 or higher, RedHat 7.5 or higher

C. Hardware requirements

- Memory: 16 GB RAM
- Free disk space: at least 100 GB available hard drive space

D. Additional software dependencies

- Java 1.8–1.15 (Java SE 8–15)
- Python 3.6 or higher

E. Required input files

- FASTQ files generated by an Illumina® sequencing platform
- CSV metadata file

Confirm Java & Python versions

NOTE: To bring up a terminal window on a Mac, go to the search box, type in 'Terminal' and press [Enter].

- Verify Java is installed and meets or exceeds the required version by typing the following into a terminal window:

```
java -version
```

- Verify Python3 is installed and the default version by typing the following into a terminal window:

```
python3 -V or python3 --version
```

NOTE: If Python3 is installed and this command returns an error, please contact [technical support](#) for additional assistance.

- Verify the required Python modules are installed by typing the following into a terminal window:

```
python3 required_python_module_check.py
```

If any modules are listed as missing, install them before proceeding.

Installation of Immune Profiler

1. Download the Immune Profiler software from takarabio.com/ngs-immune-profiler

- If a previous version of Immune Profiler is installed on the same computer as the Cogent NGS Immune Profiler will be installed, proceed to step 2
- If this is a new install, skip to step 3

2. (Uninstall the previous version)

- If you want to save any previous output files stored in the folder `immune_profiler/`, make sure to move them to another location.
- Delete the `immune_profiler/` directory and all subfolders.

3. (Install the new version): On the computer on which Immune Profiler is to be installed, unzip the Immune Profiler software package downloaded in Step 1 into the folder location of your choice.

To run the Immune Profiler:

UI (Mac-only):

- Double-click on the executable (Immune Profiler)
- Fill out the fields in the interface
- Click [Start]

Command line (Mac and Linux):

```
python3 immune_profiler.py -r <RECEPTOR>
-f <FASTQ> -m <METADATA> -o <OUTPUT>
-t CDR3 -s <SPECIES>
```

- <RECEPTOR> is the immune cell receptor type of the data being processed (options: TCR -or- BCR)
- <FASTQ> is the full path of the FASTQ folder
- <METADATA> is the filename (including the full path) of the metadata file
- <OUTPUT> is a string; it will be the name of the output folder created by the analysis AND the prefix of all the results files
- CDR3 is the target regions reads should map to (options: CDR3 -or- FL)
- <SPECIES> is the species source of the sample (options: human or mouse)

Before You Begin (Immune Viewer)

- A. Supported operating systems
 - Mac OS X: El Capitan (Version 10.11 and up)
 - Window 8 and up
- B. Hardware requirements
 - Memory: 2 GB RAM
 - Free disk space: >2 GB
- C. Additional software dependencies
 - A program that can zip and unzip files
 - A PDF file reader
- D. Required input file: *.results.csv file generated by CogentIP v1.6, from one of the following output folders:
 - report/<sampleID>/ -or-
 - airr_report/<sampleID>/

To use the Immune Viewer

1. Through a web browser, visit the URL: takarabio.com/ngs-immune-viewer
2. Click **Launch »** to start the tool.
3. Click on [Browse] under “Upload clonotype input file”.
4. In the pop-up window, navigate and select a *.results.csv file.
5. Click [OK] to upload the CSV.
6. Navigate through the tabs to view charts.
7. Click [Current view] or [All views] to download data.

End User License Agreement

Immune Profiler incorporates two third-party programs, MIGEC and MiXCR, packaged and included for use only with this software under an [end-user license agreement \(EULA\)](#), acceptance of which requires the Immune Profiler user to be bound by and to comply with the terms before downloading and using Profiler.

IMPORTANT: Checking the box next to the [EULA](#) acceptance statement before submitting the completed form constitutes accepting and legally binding the Immune Profiler user to the terms of the EULA.

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