

# Package: shazam (via r-universe)

August 31, 2024

**Type** Package

**Version** 1.2.1.999

**Date** 2024-08-01

**Title** Immunoglobulin Somatic Hypermutation Analysis

**Description** Provides a computational framework for analyzing mutations in immunoglobulin (Ig) sequences. Includes methods for Bayesian estimation of antigen-driven selection pressure, mutational load quantification, building of somatic hypermutation (SHM) models, and model-dependent distance calculations. Also includes empirically derived models of SHM for both mice and humans. Citations: Gupta and Vander Heiden, et al (2015) [doi:10.1093/bioinformatics/btv359](https://doi.org/10.1093/bioinformatics/btv359), Yaari, et al (2012) [doi:10.1093/nar/gks457](https://doi.org/10.1093/nar/gks457), Yaari, et al (2013) [doi:10.3389/fimmu.2013.00358](https://doi.org/10.3389/fimmu.2013.00358), Cui, et al (2016) [doi:10.4049/jimmunol.1502263](https://doi.org/10.4049/jimmunol.1502263).

**License** AGPL-3

**URL** <http://shazam.readthedocs.io>

**BugReports** <https://bitbucket.org/kleinsteins/shazam/issues>

**LazyData** true

**BuildVignettes** true

**VignetteBuilder** knitr, rmarkdown

**Encoding** UTF-8

**Depends** R (>= 4.0), ggplot2 (>= 3.4.0)

**Imports** alakazam (>= 1.3.0), ape, diptest, doParallel, dplyr (>= 1.0), foreach, graphics, grid, igraph (>= 1.5.0), iterators, KernSmooth, lazyeval, MASS, methods, parallel, progress, rlang, scales, seqinr, stats, stringi (>= 1.1.3), tidyr, tidyselect, utils

**Suggests** knitr, rmarkdown, testthat

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**Collate** 'Shazam.R' 'Core.R' 'RegionDefinitions.R' 'Baseline.R'  
'ConvertNumbering.R' 'MutationProfiling.R' 'Deprecated.R'  
'DistToNearest.R' 'MutationDefinitions.R' 'RegionsExtend.R'  
'Shmulate.R' 'TargetingModels.R' 'kedd.R'

**RoxygenNote** 7.3.1

**Repository** <https://ssnn-airr.r-universe.dev>

**RemoteUrl** <https://bitbucket.org/kleinstein/shazam>

**RemoteRef** HEAD

**RemoteSha** ce27e4098f8e25022a0fee9ece08b6bd9981ca2f