

Resource Summary Report

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[aLFQ](#)

RRID:SCR_005925

Type: Tool

Proper Citation

aLFQ (RRID:SCR_005925)

Resource Information

URL: <http://cran.r-project.org/web/packages/aLFQ/>

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Description: An R-package for estimating absolute protein quantities from label-free liquid chromatography tandem mass spectrometry (LC-MS/MS) proteomics data. It supports the commonly used absolute label-free protein abundance estimation methods (TopN, iBAQ, APEX, NSAF and SCAMPI) for LC-MS/MS proteomics data, quantifying on either MS1-, MS2-levels or spectral counts together with validation algorithms to enable automated data analysis and error estimation. Specifically, they used Monte-carlo cross-validation and bootstrapping for model selection and imputation of proteome-wide absolute protein quantity estimation.

Synonyms: aLFQ: An R-package for estimating absolute protein quantities from label-free LC-MS/MS proteomics data

Resource Type: software resource

Defining Citation: [PMID:24753486](#)

Keywords: standalone software, mac os x, unix/linux, windows, r

Availability: GNU General Public License, v3 or greater

Resource Name: aLFQ

Resource ID: SCR_005925

Alternate IDs: OMICS_04053

Record Creation Time: 20220129T080233+0000

Record Last Update: 20260912T195633+0000

Ratings and Alerts

No rating or validation information has been found for aLFQ.

No alerts have been found for aLFQ.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 22 mentions in open access literature.

Listed below are recent publications. The full list is available at [SPARC SAWG](#) .

Langowski MD, et al. (2025) Elicitation of liver-stage immunity by nanoparticle immunogens displaying *P. falciparum* CSP-derived antigens. NPJ vaccines, 10(1), 87.

Shrivastava S, et al. (2023) SARS-CoV-2 spike-ferritin-nanoparticle adjuvanted with ALFQ induces long-lived plasma cells and cross-neutralizing antibodies. NPJ vaccines, 8(1), 43.

Abucayon EG, et al. (2023) QS21-Initiated Fusion of Liposomal Small Unilamellar Vesicles to Form ALFQ Results in Concentration of Most of the Monophosphoryl Lipid A, QS21, and Cholesterol in Giant Unilamellar Vesicles. Pharmaceutics, 15(9).

Abucayon EG, et al. (2023) A Liquid Chromatography High-Resolution Tandem Mass Spectrometry Method to Quantify QS-21 Adjuvant and Its Degradation Products in Liposomal Drug Formulations. ACS omega, 8(23), 21016.

Rikhi N, et al. (2023) Unconjugated Multi-Epitope Peptides Adjuvanted with ALFQ Induce Durable and Broadly Reactive Antibodies to Human and Avian Influenza Viruses. Vaccines, 11(9).

Jobe O, et al. (2022) Army liposome formulation containing QS-21 render human monocyte-derived macrophages less permissive to HIV-1 infection by upregulating ABOBEC3A. Scientific reports, 12(1), 7570.

Valgepea K, et al. (2022) Absolute Proteome Quantification in the Gas-Fermenting Acetogen *Clostridium autoethanogenum*. mSystems, 7(2), e0002622.

Langowski MD, et al. (2022) Restricted valency (NPNA)_n repeats and junctional epitope-based circumsporozoite protein vaccines against *Plasmodium falciparum*. NPJ vaccines, 7(1), 13.

Wuertz KM, et al. (2021) A SARS-CoV-2 spike ferritin nanoparticle vaccine protects against heterologous challenge with B.1.1.7 and B.1.351 virus variants in Syrian golden hamsters. bioRxiv : the preprint server for biology.

Wuertz KM, et al. (2021) A SARS-CoV-2 spike ferritin nanoparticle vaccine protects hamsters against Alpha and Beta virus variant challenge. NPJ vaccines, 6(1), 129.

King HAD, et al. (2021) Efficacy and breadth of adjuvanted SARS-CoV-2 receptor-binding domain nanoparticle vaccine in macaques. *Proceedings of the National Academy of Sciences of the United States of America*, 118(38).

Sei CJ, et al. (2021) Conserved Influenza Hemagglutinin, Neuraminidase and Matrix Peptides Adjuvanted with ALFQ Induce Broadly Neutralizing Antibodies. *Vaccines*, 9(7).

Trauner A, et al. (2021) Expression Dysregulation as a Mediator of Fitness Costs in Antibiotic Resistance. *Antimicrobial agents and chemotherapy*, 65(9), e0050421.

Eggers B, et al. (2021) Advanced Fiber Type-Specific Protein Profiles Derived from Adult Murine Skeletal Muscle. *Proteomes*, 9(2).

Singh P, et al. (2020) Biophysical characterization of polydisperse liposomal adjuvant formulations. *Biochemical and biophysical research communications*, 529(2), 362.

Verma A, et al. (2020) Impact of Th1 CD4 Follicular Helper T Cell Skewing on Antibody Responses to an HIV-1 Vaccine in Rhesus Macaques. *Journal of virology*, 94(6).

Bouchal P, et al. (2019) Breast Cancer Classification Based on Proteotypes Obtained by SWATH Mass Spectrometry. *Cell reports*, 28(3), 832.

Celis-Gutierrez J, et al. (2019) Quantitative Interactomics in Primary T Cells Provides a Rationale for Concomitant PD-1 and BTLA Coinhibitor Blockade in Cancer Immunotherapy. *Cell reports*, 27(11), 3315.

Chaudhury S, et al. (2018) Identification of Immune Signatures of Novel Adjuvant Formulations Using Machine Learning. *Scientific reports*, 8(1), 17508.

Beck Z, et al. (2018) Immune response to antigen adsorbed to aluminum hydroxide particles: Effects of co-adsorption of ALF or ALFQ adjuvant to the aluminum-antigen complex. *Journal of controlled release : official journal of the Controlled Release Society*, 275, 12.