

# 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/>

**Proper Citation:** aLFQ (RRID:SCR\_005925)

**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:** 20260725T190614+0000

### Ratings and Alerts

No rating or validation information has been found for aLFQ.

No alerts have been found for aLFQ.

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## Data and Source Information

**Source:** [SciCrunch Registry](#)

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## Usage and Citation Metrics

We found 22 mentions in open access literature.

**Listed below are recent publications.** The full list is available at [nidm-terms](#).

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.

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

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

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).

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

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

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.