

# Resource Summary Report

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## qvality - Nonparametric estimation of posterior error probabilities

RRID:SCR\_004309

Type: Tool

### Proper Citation

qvality - Nonparametric estimation of posterior error probabilities (RRID:SCR\_004309)

### Resource Information

**URL:** <http://noble.gs.washington.edu/proj/qvality/>

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**Description:** qvality estimates q-values and posterior error probabilities directly from score distributions. The method can be accessed via a web interface or downloaded as stand-alone software (C++ source code and binaries are available under MIT license). The qvality web server allows you to use qvality to compute posterior error probability and q-values for your data. There are two input modes: \*Input the empirical score distribution and a corresponding null score distribution. The two inputs do not have to contain the same numbers of scores. \*Input only the empirical p-value distribution. In this case, you must use p-values rather than raw scores. In either mode, the output is the same: a three-column file in which the first column contains sorted observed scores, the second column contains estimated q-values, and the third column contains estimated posterior error probabilities. Qvality is a C++ program for estimating two types of standard statistical confidence measures: the q-value, which is an analog of the p-value that incorporates multiple testing correction, and the posterior error probability (PEP, also known as the local false discovery rate), which corresponds to the probability that a given observation is drawn from the null distribution. In computing q-values, qvality employs a standard bootstrap procedure to estimate the prior probability of a score being from the null distribution; for PEP estimation, qvality relies upon non-parametric logistic regression. Relative to other tools for estimating statistical confidence measures, qvality is unique in its ability to estimate both types of scores directly from a null distribution, without requiring the user to calculate p-values.

**Synonyms:** qvality

**Resource Type:** binary executable, computation service resource, software resource, source code

**Defining Citation:** [PMID:19193729](https://pubmed.ncbi.nlm.nih.gov/19193729/)

**Resource Name:** qvality - Nonparametric estimation of posterior error probabilities

**Resource ID:** SCR\_004309

**Alternate IDs:** nlx\_32652

**Record Creation Time:** 20220129T080223+0000

**Record Last Update:** 20260905T132517+0000

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## Ratings and Alerts

No rating or validation information has been found for qvality - Nonparametric estimation of posterior error probabilities.

No alerts have been found for qvality - Nonparametric estimation of posterior error probabilities.

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## Data and Source Information

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

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## Usage and Citation Metrics

We found 13 mentions in open access literature.

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

Scifo E, et al. (2025) Proteomic aging signatures across mouse organs and life stages. The EMBO journal, 44(16), 4631.

Peterson KD, et al. (2025) Bovine Endometrium Drives and Responds to Divergence of In??Vitro Produced Conceptus Biochemistry. FASEB journal : official publication of the Federation of American Societies for Experimental Biology, 39(16), e70951.

Parnell E, et al. (2025) Oligodendrocyte myelin glycoprotein impairs dendritic arbors via schizophrenia risk gene Trio. Neurobiology of disease, 211, 106928.

Blazev R, et al. (2025) Site-specific quantification of the in vivo UFMylome reveals myosin modification in ALS. Cell reports methods, 5(5), 101048.

Li L, et al. (2025) OTULIN Interactome Reveals Immune Response and Autophagy Associated with Tauopathy in a Mouse Model. bioRxiv : the preprint server for biology.

Dutt M, et al. (2025) Phosphoproteomics of aged insulin-resistant bone identifies P70S6K phosphorylation of AFF4 as a gene-specific transcriptional regulator. Nature communications, 17(1), 1347.

Johnson DL, et al. (2024) Ccr4-not ubiquitin ligase signaling regulates ribosomal protein homeostasis and inhibits 40S ribosomal autophagy. *The Journal of biological chemistry*, 300(8), 107582.

Johnson DL, et al. (2023) Ccr4-Not ubiquitin ligase signaling regulates ribosomal protein homeostasis and inhibits 40S ribosomal autophagy. *bioRxiv : the preprint server for biology*.

Valdivia AO, et al. (2022) Lyso-Lipid-Induced Oligodendrocyte Maturation Underlies Restoration of Optic Nerve Function. *eNeuro*, 9(1).

Valdivia AO, et al. (2020) Capillary Electrophoresis Assessment of Plasma Protein Changes in an African Penguin (*Spheniscus demersus*) With Aspergillosis. *ACS omega*, 5(51), 33280.

Verano-Braga T, et al. (2018) SuperQuant-assisted comparative proteome analysis of glioblastoma subpopulations allows for identification of potential novel therapeutic targets and cell markers. *Oncotarget*, 9(10), 9400.

Hartmann M, et al. (2015) Distinct soil microbial diversity under long-term organic and conventional farming. *The ISME journal*, 9(5), 1177.

Kumar J, et al. (2011) LRP4 association to bone properties and fracture and interaction with genes in the Wnt- and BMP signaling pathways. *Bone*, 49(3), 343.