Resource Summary Report

Generated by RRID on May 19, 2025

eQuilibrator

RRID:SCR_006011
Type: Tool

Proper Citation

eQuilibrator (RRID:SCR_006011)

Resource Information

URL: http://equilibrator.weizmann.ac.il/

Proper Citation: eQuilibrator (RRID:SCR_006011)

Description: Web interface designed for thermodynamic analysis of biochemical systems. eQuilibrator enables free-text search for biochemical compounds and reactions and provides thermodynamic estimates for both in a variety of conditions. It can provide estimates for compounds in the KEGG database, and individual compounds and enzymes can be searched for by their common names (water, glucosamine, hexokinase). Reactions can be entered in a free-text format that eQuilibrator parses automatically. eQuilibrator also allows manipulation of the conditions of a reaction - pH, ionic strength, and reactant and product concentrations.

Synonyms: eQuilibrator - biochemical thermodynamics calculator

Resource Type: database, software resource, web application, data or information resource

Defining Citation: PMID:22064852

Keywords: web interface, thermodynamics, biochemical system, bio.tools, FASEB list

Funding: Azrieli Foundation ;
Israel Academy of Sciences and Humanities ;
European Research Council 260392 - SYMPAC

Availability: Open source

Resource Name: eQuilibrator

Resource ID: SCR_006011

Alternate IDs: nlx_151400, biotools:equilibrator

Alternate URLs: https://bio.tools/equilibrator

Record Creation Time: 20220129T080233+0000

Record Last Update: 20250519T203429+0000

Ratings and Alerts

No rating or validation information has been found for eQuilibrator.

No alerts have been found for eQuilibrator.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 91 mentions in open access literature.

Listed below are recent publications. The full list is available at RRID.

Voorsluijs V, et al. (2024) Calcium oscillations optimize the energetic efficiency of mitochondrial metabolism. iScience, 27(3), 109078.

Mrnjavac N, et al. (2024) The radical impact of oxygen on prokaryotic evolution-enzyme inhibition first, uninhibited essential biosyntheses second, aerobic respiration third. FEBS letters, 598(14), 1692.

Timouma S, et al. (2024) Development of a genome-scale metabolic model for the lager hybrid yeast S. pastorianus to understand the evolution of metabolic pathways in industrial settings. mSystems, 9(6), e0042924.

Versluis DM, et al. (2024) 2'-Fucosyllactose helps butyrate producers outgrow competitors in infant gut microbiota simulations. iScience, 27(3), 109085.

Gollub MG, et al. (2024) ENKIE: a package for predicting enzyme kinetic parameter values and their uncertainties. Bioinformatics (Oxford, England), 40(11).

Brown GC, et al. (2024) Bioenergetic myths of energy transduction in eukaryotic cells. Frontiers in molecular biosciences, 11, 1402910.

Wei X, et al. (2024) ATP-free in vitro biotransformation of starch-derived maltodextrin into poly-3-hydroxybutyrate via acetyl-CoA. Nature communications, 15(1), 3267.

Guo F, et al. (2024) Evolutionary engineering of Saccharomyces cerevisiae: Crafting a synthetic methylotroph via self-reprogramming. Science advances, 10(51), eadq3484.

Wei F, et al. (2024) Unveiling Metabolic Engineering Strategies by Quantitative Heterologous Pathway Design. Advanced science (Weinheim, Baden-Wurttemberg, Germany), 11(45), e2404632.

Ji J, et al. (2024) PredCMB: predicting changes in microbial metabolites based on the gene-metabolite network analysis of shotgun metagenome data. Bioinformatics (Oxford, England), 41(1).

Chen L, et al. (2023) Biosynthesis of Lacto-N-biose I from starch and N-acetylglucosamine via an in vitro synthetic enzymatic biosystem. Synthetic and systems biotechnology, 8(3), 555.

Dahal S, et al. (2023) Genome-scale model of Pseudomonas aeruginosa metabolism unveils virulence and drug potentiation. Communications biology, 6(1), 165.

Vásquez Castro E, et al. (2023) Carbon efficient production of chemicals with yeasts. Yeast (Chichester, England), 40(12), 583.

Kang Q, et al. (2023) A synthetic cell-free 36-enzyme reaction system for vitamin B12 production. Nature communications, 14(1), 5177.

Lo J, et al. (2023) Thermodynamic and Kinetic Modeling Directs Pathway Optimization for Isopropanol Production in a Gas-Fermenting Bacterium. mSystems, 8(2), e0127422.

Bierbaumer S, et al. (2023) Enzymatic Conversion of CO2: From Natural to Artificial Utilization. Chemical reviews, 123(9), 5702.

Takano S, et al. (2023) The Architecture of Metabolic Networks Constrains the Evolution of Microbial Resource Hierarchies. Molecular biology and evolution, 40(9).

Thornburg ZR, et al. (2022) Fundamental behaviors emerge from simulations of a living minimal cell. Cell, 185(2), 345.

Ter-Ovanessian LMP, et al. (2022) Building the uracil skeleton in primitive ponds at the origins of life: carbamoylation of aspartic acid. Scientific reports, 12(1), 19178.

Boonekamp FJ, et al. (2022) Full humanization of the glycolytic pathway in Saccharomyces cerevisiae. Cell reports, 39(13), 111010.