Resource Summary Report

Generated by kravitz2 on Sep 4, 2026

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

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: 20260903T234815+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 118 mentions in open access literature.

Listed below are recent publications. The full list is available at kravitz2 .

Xu R, et al. (2026) KineticGP: A computational framework for genomic prediction of leaf photosynthetic traits. Plant communications, 7(5), 101685.

Sharma BD, et al. (2026) Metabolic imbalance limits fermentation in microbes engineered for high-titer ethanol production. mSystems, 11(4), e0007426.

Bauer J, et al. (2026) Thermodynamic metabolic modeling of growth and bioproduction potential of the acetogen Acetobacterium woodii with and without redox cofactor swaps. Synthetic and systems biotechnology, 14, 546.

Xiao K, et al. (2026) Combining Electrochemical Reduction with Biosynthesis for Directed Conversion of CO2 into a Library of C3 Chemicals. Advanced science (Weinheim, Baden-Wurttemberg, Germany), 13(17), e22097.

Liu B, et al. (2026) Ultra-rapid and high-titer biomanufacturing of trehalose 6-phosphate by an in vitro synthetic biology platform. Bioresources and bioprocessing, 13(1).

Willers VP, et al. (2026) Plug-and-play - enzymatic amino acid production from methanol and carbon dioxide. Nature communications, 17(1).

Goryanin I, et al. (2026) EHMN 2026: A Thermodynamically Refined, SBML-Standardised Human Metabolic Network for Genome-Scale Analysis and QSP Integration. Metabolites, 16(4).

de Leeuw M, et al. (2026) Kinetic sampling shows the effect of medium composition on metabolic control in Saccharomyces cerevisiae. Microbial cell factories, 25(1).

Malla S, et al. (2026) Pathway thermodynamic analysis postulates change in glutamate metabolism as a key factor in modulating immune responses. Immunometabolism (Cobham, Surrey), 8(1), e00077.

Zhong W, et al. (2026) Engineering energy-efficient Saccharomyces cerevisiae for methanol and CO2 assimilation. Nature communications, 17(1), 1806.

Scott KM, et al. (2026) Evidence for ecological adaptation of reductive citric acid and reverse oxidative citric acid cycles based on a survey of genomes from autotrophic Bacteria. FEMS microbes, 7, xtag016.

Slocombe L, et al. (2026) CBR-db: A Cheminformatic Database for Biochemical Reaction Analysis. ACS synthetic biology, 15(6), 2684.

Wendering P, et al. (2026) Kinetic parameter prediction using neural networks identifies limitations to C4 photosynthesis. The New phytologist, 251(3), 1578.

Love AM, et al. (2025) Reversal of the Leloir pathway to promote galactose and tagatose synthesis from glucose. Cell reports. Physical science, 6(12).

Chainani Y, et al. (2025) Merging the computational design of chimeric type I polyketide synthases with enzymatic pathways for chemical biosynthesis. Nature communications, 16(1), 5787.

Keller P, et al. (2025) Identification of overoxidizing and non-overoxidizing NAD-dependent methanol dehydrogenases and implications for synthetic methylotrophy. Nature communications, 16(1), 10967.

Cannon WR, et al. (2025) Redox poise in R. rubrum phototrophic growth drives large-scale changes in macromolecular pathways. PLoS computational biology, 21(6), e1013015.

Elizondo BR, et al. (2025) Complex Kinetic Models Predict ??-Carotene Production and Reveal Flux Limitations in Recombinant Saccharomyces cerevisiae Strains. ACS synthetic biology, 14(9), 3457.

Strachan CR, et al. (2025) Distinct lactate utilization strategies drive niche differentiation between two co-existing Megasphaera species in the rumen microbiome. The ISME journal, 19(1).

Liu Y, et al. (2025) Systematic design and evaluation of artificial CO2 assimilation pathways. Synthetic and systems biotechnology, 10(4), 1107.