Resource Summary Report

Generated by <u>NIF</u> on May 16, 2025

EcoCyc

RRID:SCR_002433 Type: Tool

Proper Citation

EcoCyc (RRID:SCR_002433)

Resource Information

URL: http://ecocyc.org/

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Description: Database for the bacterium Escherichia coli K-12 MG1655, the EcoCyc project performs literature-based curation of the entire genome, and of transcriptional regulation, transporters, and metabolic pathways. The long-term goal of the project is to describe the molecular catalog of the E. coli cell, as well as the functions of each of its molecular parts, to facilitate a system-level understanding of E. coli. EcoCyc is an electronic reference source for E. coli biologists, and for biologists who work with related microorganisms.

Abbreviations: EcoCyc, EcoCyc REF

Synonyms: EcoCyc REF

Resource Type: data or information resource, database

Defining Citation: PMID:23143106, PMID:21097882

Keywords: genome, metabolic pathway, transcription, transporters, escherichia coli, transcriptional regulation, metabolism, pathway, FASEB list

Funding: NCRR ; NIGMS GM077678; NIGMS GM71962

Resource Name: EcoCyc

Resource ID: SCR_002433

Alternate IDs: OMICS_01645, nif-0000-02783

Record Creation Time: 20220129T080213+0000

Record Last Update: 20250507T060048+0000

Ratings and Alerts

No rating or validation information has been found for EcoCyc.

No alerts have been found for EcoCyc.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 452 mentions in open access literature.

Listed below are recent publications. The full list is available at <u>NIF</u>.

Hasenauer FC, et al. (2025) Genome-wide mapping of spontaneous DNA replication errorhotspots using mismatch repair proteins in rapidly proliferating Escherichia coli. Nucleic acids research, 53(2).

Bush NG, et al. (2025) Insights into antibiotic resistance promoted by quinolone exposure. Antimicrobial agents and chemotherapy, 69(1), e0099724.

Knoke LR, et al. (2025) The ABC transporter Opp imports reduced glutathione, while Gsi imports glutathione disulfide in Escherichia coli. Redox biology, 79, 103453.

Salazar-Alemán DA, et al. (2025) Escherichia coli growing under antimicrobial gallium nitrate stress reveals new processes of tolerance and toxicity. Scientific reports, 15(1), 1389.

Sun G, et al. (2024) Cross-evaluation of E. coli's operon structures via a whole-cell model suggests alternative cellular benefits for low- versus high-expressing operons. Cell systems, 15(3), 227.

Fan X, et al. (2024) Analysis of RNA translation with a deep learning architecture provides new insight into translation control. bioRxiv : the preprint server for biology.

Lara P, et al. (2024) Flexible gold standards for transcription factor regulatory interactions in Escherichia coli K-12: architecture of evidence types. Frontiers in genetics, 15, 1353553.

Gil-Gomez A, et al. (2024) Wiring Between Close Nodes in Molecular Networks Evolves

More Quickly Than Between Distant Nodes. Molecular biology and evolution, 41(5).

Hussein M, et al. (2024) Providing insight into the mechanism of action of cationic lipidated oligomers using metabolomics. mSystems, 9(5), e0009324.

Lawaetz AC, et al. (2024) Genome-wide annotation of transcript boundaries using bacterial Rend-seq datasets. Microbial genomics, 10(4).

Çöl B, et al. (2024) Genome-Wide Screens Identify Genes Responsible for Intrinsic Boric Acid Resistance in Escherichia coli. Biological trace element research, 202(12), 5771.

Fang T, et al. (2024) Enhancing coevolutionary signals in protein-protein interaction prediction through clade-wise alignment integration. Scientific reports, 14(1), 6009.

Raghavan I, et al. (2024) The non-mevalonate pathway requires a delicate balance of intermediates to maximize terpene production. Applied microbiology and biotechnology, 108(1), 245.

Vigoda MB, et al. (2024) Unraveling the interplay between a small RNA and RNase E in bacteria. Nucleic acids research, 52(15), 8947.

Moore LR, et al. (2024) Revisiting the y-ome of Escherichia coli. Nucleic acids research, 52(20), 12201.

Saunders SH, et al. (2024) ORBIT for E. coli: kilobase-scale oligonucleotide recombineering at high throughput and high efficiency. Nucleic acids research, 52(8), e43.

Truong NHM, et al. (2024) Analyzing the correlation between protein expression and sequence-related features of mRNA and protein in Escherichia coli K-12 MG1655 model. PloS one, 19(2), e0288526.

Gray MJ, et al. (2024) The role of metals in hypothiocyanite resistance in Escherichia coli. bioRxiv : the preprint server for biology.

Xia Z, et al. (2024) CRP and IHF act as host regulators in Royal Jelly's antibacterial activity. Scientific reports, 14(1), 19350.

González-González A, et al. (2024) Patterns of Fitness and Gene Expression Epistasis Generated by Beneficial Mutations in the rho and rpoB Genes of Escherichia coli during High-Temperature Adaptation. Molecular biology and evolution, 41(9).