

Resource Summary Report

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OGEE - Online GENE Essentiality database

RRID:SCR_006080

Type: Tool

Proper Citation

OGEE - Online GENE Essentiality database (RRID:SCR_006080)

Resource Information

URL: <http://ogeedb.embl.de/#summary>

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Description: Online GENE Essentiality database containing genes that were tested experimentally for essentiality and their features; it also provides a set of tools to systematically explore and analyze these data. The main purpose of this project is to better understand gene essentiality by facilitating the comparisons of the differences and similarities between essential and non-essential genes. This is achieved by collecting not only experimentally tested essential and non-essential genes, but also associated gene features such as expression profiles, duplication status, conservation across species, evolutionary origins and involvement in embryonic development. We focus on large-scale experiments and complement our data with text-mining results. Genes are organized into data sets according to their sources. Genes with variable essentiality status across data sets are tagged as conditionally essential, highlighting the complex interplay between gene functions and environments. Linked tools allow the user to compare gene essentiality among different gene groups, or compare features of essential genes to non-essential genes, and visualize the results. Why is it different from existing databases? * we included both essential and non-essential genes so that we could better understand the gene essentiality by comparing the similarities and differences between the two gene sets; * we compiled a list of features for each gene, including whether they are duplicates or involved in development, the number of other homologous genes in the same genome, as well as their earliest expression stages during development. These features are keys to understand the essentiality of genes; * we also provide a set of tools to explore our data and visualize the results. For example, users can simply divide genes into two groups according to whether they are duplicates, calculate the proportion of essential genes (PE%) in each group and then visualize the results in a bar plot; or they can classify genes into multiple groups according to their earliest expression stages during evolution, compare the essentiality of genes that were expressed earlier with those were latter, and plot the results in a line chart.

Abbreviations: OGEE, OGEEdb

Synonyms: Online GENE Essentiality database

Resource Type: production service resource, data or information resource, database, service resource, data analysis service, analysis service resource

Defining Citation: [PMID:22075992](#)

Keywords: genome-wide association study, essentiality, gene, essential gene, non-essential gene, growth, expression profile, duplication status, conservation, evolutionary origin, embryonic development, text-mining, gene function, environment, bio.tools

Funding: BMBF 0315450C

Availability: Free

Resource Name: OGEE - Online GENE Essentiality database

Resource ID: SCR_006080

Alternate IDs: nlx_151488, biotools:ogee

Alternate URLs: <https://bio.tools/ogee>

Record Creation Time: 20220129T080234+0000

Record Last Update: 20260803T040427+0000

Ratings and Alerts

No rating or validation information has been found for OGEE - Online GENE Essentiality database.

No alerts have been found for OGEE - Online GENE Essentiality database.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 2 mentions in open access literature.

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

De Kegel B, et al. (2021) Comprehensive prediction of robust synthetic lethality between paralog pairs in cancer cell lines. Cell systems, 12(12), 1144.

Chakraborty S, et al. (2013) Evolutionary rate heterogeneity of core and attachment proteins in yeast protein complexes. Genome biology and evolution, 5(7), 1366.