Resource Summary Report

Generated by NIF on May 24, 2025

TARGETgene

RRID:SCR_001392
Type: Tool

Proper Citation

TARGETgene (RRID:SCR_001392)

Resource Information

URL: http://bmsr.usc.edu/software/targetgene/

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Description: MATLAB tool to effectively identify potential therapeutic targets and drugs in cancer using genetic network-based approaches. It can rapidly extract genetic interactions from a precompiled database stored as a MATLAB MAT-file without the need to interrogate remote SQL databases. Millions of interactions involving thousands of candidate genes can be mapped to the genetic network within minutes. While TARGETgene is currently based on the gene network reported in (Wu et al.,Bioinformatics 26:807-813, 2010), it can be easily extended to allow the optional use of other developed gene networks. The simple graphical user interface also enables rapid, intuitive mapping and analysis of therapeutic targets at the systems level. By mapping predictions to drug-target information, TARGETgene may be used as an initial drug screening tool that identifies compounds for further evaluation. In addition, TARGETgene is expected to be applicable to identify potential therapeutic targets for any type or subtype of cancers, even those rare cancers that are not genetically recognized. Identification of Potential Therapeutic Targets * Prioritize potential therapeutic targets from thousands of candidate genes generated from high-throughput experiments using network-based metrics * Validate predictions (prioritization) using user-defined benchmark genes and curated cancer genes * Explore biologic information of selected targets through external databases (e.g., NCBI Entrez Gene) and gene function enrichment analysis Initial Drug Screening * Identify for further evaluation existing drugs and compounds that may act on the potential therapeutic targets identified by TARGETgene * Explore general information on identified drugs of interest through several external links Operating System: Windows XP / Vista / 7

Abbreviations: TARGETgene

Resource Type: software resource, software application

Defining Citation: PMID:22952662

Keywords: disease target, drug discovery, drug, matlab, gene network, genetic interaction, gene, drug screening, mutation driver, therapeutic target, drug candidate, compound, mapping, analysis

Related Condition: Cancer

Funding: NIBIB P41-EB001978

Availability: Free, Under the terms of a Release Agreement., Please cite

Resource Name: TARGETgene

Resource ID: SCR_001392

Alternate IDs: nlx_152573

Old URLs: http://bmsr.usc.edu/Software/TARGET/TARGET.html

Record Creation Time: 20220129T080207+0000

Record Last Update: 20250524T055809+0000

Ratings and Alerts

No rating or validation information has been found for TARGETgene.

No alerts have been found for TARGETgene.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 6 mentions in open access literature.

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

Lin S, et al. (2024) TargetGene: a comprehensive database of cell-type-specific target genes for genetic variants. Nucleic acids research, 52(D1), D1072.

Lee T, et al. (2021) Shared Blood Transcriptomic Signatures between Alzheimer's Disease and Diabetes Mellitus. Biomedicines, 9(1).

Makhijani RK, et al. (2018) Identification of common key genes in breast, lung and prostate cancer and exploration of their heterogeneous expression. Oncology letters, 15(2), 1680.

Weidenbusch B, et al. (2018) Transcriptome based individualized therapy of refractory pediatric sarcomas: feasibility, tolerability and efficacy. Oncotarget, 9(29), 20747.

Monchaux M, et al. (2017) Inflammatory Processes Associated with Canine Intervertebral Disc Herniation. Frontiers in immunology, 8, 1681.

Letchumanan V, et al. (2015) Prevalence and antimicrobial susceptibility of Vibrio parahaemolyticus isolated from retail shrimps in Malaysia. Frontiers in microbiology, 6, 33.