Resource Summary Report

Generated by RRID on Apr 11, 2025

PlantNATsDB - Plant Natural Antisense Transcripts DataBase

RRID:SCR_013278
Type: Tool

Proper Citation

PlantNATsDB - Plant Natural Antisense Transcripts DataBase (RRID:SCR_013278)

Resource Information

URL: http://bis.zju.edu.cn/pnatdb/

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Description: Natural Antisense Transcripts (NATs), a kind of regulatory RNAs, occur prevalently in plant genomes and play significant roles in physiological and/or pathological processes. PlantNATsDB (Plant Natural Antisense Transcripts DataBase) is a platform for annotating and discovering NATs by integrating various data sources involving approximately 2 million NAT pairs in 69 plant species. PlantNATsDB also provides an integrative, interactive and information-rich web graphical interface to display multidimensional data, and facilitate plant research community and the discovery of functional NATs. GO annotation and high-throughput small RNA sequencing data currently available were integrated to investigate the biological function of NATs. A ""Gene Set Analysis"" module based on GO annotation was designed to dig out the statistical significantly overrepresented GO categories from the specific NAT network. PlantNATsDB is currently the most comprehensive resource of NATs in the plant kingdom, which can serve as a reference database to investigate the regulatory function of NATs.

Abbreviations: PlantNATsDB

Synonyms: Plant Natural Antisense Transcripts DataBase

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

Defining Citation: PMID:22058132

Keywords: natural antisense transcript, annotation, high-throughput, small rna sequencing, function, regulatory function, predict, sequence, small rna, blast, bio.tools

Funding: National Natural Sciences Foundation of China 30971743;
National Natural Sciences Foundation of China 31050110121;
National Natural Sciences Foundation of China 31071659;
Ministry of Science and Technology of China 2009DFA32030;
Program for New Century Excellent Talents in University of China NCET-07-0740;
Huazhong Agricultural University Scientific and Technological Self-innovation Foundation 2010SC07

Availability: Free

Resource Name: PlantNATsDB - Plant Natural Antisense Transcripts DataBase

Resource ID: SCR_013278

Alternate IDs: nlx_151492, biotools:plantnatsdb

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

Record Creation Time: 20220129T080315+0000

Record Last Update: 20250411T055624+0000

Ratings and Alerts

No rating or validation information has been found for PlantNATsDB - Plant Natural Antisense Transcripts DataBase.

No alerts have been found for PlantNATsDB - Plant Natural Antisense Transcripts DataBase.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 9 mentions in open access literature.

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

Zhong J, et al. (2020) A putative AGO protein, OsAGO17, positively regulates grain size and grain weight through OsmiR397b in rice. Plant biotechnology journal, 18(4), 916.

Niu C, et al. (2019) Genome-wide identification of drought-responsive microRNAs in two sets

of Malus from interspecific hybrid progenies. Horticulture research, 6, 75.

Lian C, et al. (2018) Exploration of ABA Responsive miRNAs Reveals a New Hormone Signaling Crosstalk Pathway Regulating Root Growth of Populus euphratica. International journal of molecular sciences, 19(5).

Flórez-Zapata NM, et al. (2016) Long non-coding RNAs are major contributors to transcriptome changes in sunflower meiocytes with different recombination rates. BMC genomics, 17, 490.

Wang L, et al. (2016) Genome-Wide Identification of MicroRNAs and Their Targets in the Leaves and Fruits of Eucommia ulmoides Using High-Throughput Sequencing. Frontiers in plant science, 7, 1632.

Duan H, et al. (2016) Genome-Wide Analysis of MicroRNA Responses to the Phytohormone Abscisic Acid in Populus euphratica. Frontiers in plant science, 7, 1184.

Hu H, et al. (2015) Bioinformatics analysis of small RNAs in pima (Gossypium barbadense L.). PloS one, 10(2), e0116826.

Liu X, et al. (2015) Long non-coding RNAs and their biological roles in plants. Genomics, proteomics & bioinformatics, 13(3), 137.

Britto-Kido Sde A, et al. (2013) Natural antisense transcripts in plants: a review and identification in soybean infected with Phakopsora pachyrhizi SuperSAGE library. TheScientificWorldJournal, 2013, 219798.