Resource Summary Report

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RNA FRABASE - RNA FRAgments search engine and dataBASE

RRID:SCR_012808
Type: Tool

Proper Citation

RNA FRABASE - RNA FRAgments search engine and dataBASE (RRID:SCR_012808)

Resource Information

URL: http://rnafrabase.ibch.poznan.pl/

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Description: Engine and database to search the three-dimensional fragments within 3D RNA structures using as an input the sequence(s) and / or secondary structure(s) given in the dot-bracket notation. The database contains RNA sequences and secondary structures, described in the dot-bracket notation, derived from PDB-deposited RNA structures and their complexes. It also contains atom coordinates of the unmodified and modified nucleotide and nucleoside residues extracted from the PDB-deposited RNA structures, as well as torsion and pseudotorsion angle values, sugar pucker parameters and classification of base pair types given for the PBD-deposited RNA structures. Knowledge of the three dimensional RNA structure is crucial for all fields of biomolecular research. In contrast to the protein field, only about 1.300 experimentally derived structures of RNAs are deposited in the Protein Data Bank (PDB). To complement the results of experimental studies, new approaches based on bioinformatics and calculation are pursued in several laboratories to make tertiary RNA structure prediction possible. RNA FRABASE version 2.0 should greatly facilitate various RNA structure modelling approaches, RNA structure analysis and motif searching. If one compares the three dimensional RNA structure to a spatial puzzle, the RNA FRABASE allows to pull out a defined piece of this puzzle - the 3D RNA fragment. The architecture of the web-accessible RNA FRABASE engine and database is based on the following information path: PDB-deposited RNA structures ?? RNA sequences and secondary structures described in the dot-bracket notation ?? secondary structures of RNA fragments ?? 3D RNA fragments. RNA FRABASE 2.0 also stores data and conformational parameters in order to provide on the spot structural filters to explore the three-dimensional RNA structures. An instant visualization of the 3D RNA structures is provided.

Abbreviations: RNA FRABASE

Synonyms: RNA FRAgments search engine dataBASE, RNA FRAgments search engine and dataBASE, RNA FRABASE - RNA FRAgments search engine dataBASE

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

Defining Citation: PMID:20459631, PMID:17921499

Keywords: structural element, secondary structure, rna, rna structure, 3d rna fragment, bio.tools

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Resource Name: RNA FRABASE - RNA FRAgments search engine and dataBASE

Resource ID: SCR_012808

Alternate IDs: nif-0000-03413, biotools:rna_frabase

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

Record Creation Time: 20220129T080312+0000

Record Last Update: 20260821T193950+0000

Ratings and Alerts

No rating or validation information has been found for RNA FRABASE - RNA FRAgments search engine and dataBASE.

No alerts have been found for RNA FRABASE - RNA FRAgments search engine and dataBASE.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We have not found any literature mentions for this resource.