

Resource Summary Report

Generated by [SPARC SAWG](#) on Jul 28, 2026

NUPACK

RRID:SCR_022274

Type: Tool

Proper Citation

NUPACK (RRID:SCR_022274)

Resource Information

URL: <http://www.nupack.org/>

Proper Citation: NUPACK (RRID:SCR_022274)

Description: Web server for analysis and design of nucleic acid systems. Enables thermodynamic analysis of dilute solutions of interacting nucleic acid strands. Analysis and design of nucleic acid secondary structure for systems involving one or more species of interacting strands.

Synonyms: Nucleic Acid Package

Resource Type: web service, data access protocol, software resource

Defining Citation: [PMID:20645303](#)

Keywords: nucleic acid secondary structure analysis and design, nucleic acid strands dilute solutions, interacting nucleic acid strands, nucleic acid strands, thermodynamic analysis,

Availability: Free, Freely available

Resource Name: NUPACK

Resource ID: SCR_022274

Record Creation Time: 20220511T050132+0000

Record Last Update: 20260728T043633+0000

Ratings and Alerts

No rating or validation information has been found for NUPACK.

No alerts have been found for NUPACK.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 32 mentions in open access literature.

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

Liu W, et al. (2025) Y-shaped DNA as a dynamic self-assembly nanomaterial for phenotype-specific regulation of stem cell differentiation on the gene level. *Regenerative biomaterials*, 12, rbaf043.

Garcia-Guerra A, et al. (2025) Tissue-specific modulation of CRISPR activity by miRNA-sensing guide RNAs. *Nucleic acids research*, 53(2).

Xu X, et al. (2025) CRISPR/Cas13X-assisted programmable and multiplexed translation regulation for controlled biosynthesis. *Nucleic acids research*, 53(1).

Nakashima KK, et al. (2025) Differential stability and dynamics of DNA-based and RNA-based coacervates affect non-enzymatic RNA chemistry. *Nature communications*, 16(1), 9296.

Sleath H, et al. (2025) Haptotactic Motion of Multivalent Vesicles Along Ligand-Density Gradients. *Langmuir : the ACS journal of surfaces and colloids*, 41(18), 11474.

Wang R, et al. (2025) How Large is the Universe of RNA-Like Motifs? A Clustering Analysis of RNA Graph Motifs Using Topological Descriptors. *ArXiv*.

Cabello-Garcia J, et al. (2025) Information propagation through enzyme-free catalytic templating of DNA dimerization with weak product inhibition. *Nature chemistry*, 17(8), 1179.

Liu Q, et al. (2025) Mirror-synchronized asymmetric CRISPR nanoswitch for single-molecule profiling of multiple circRNAs in different stages of breast cancer. *Nucleic acids research*, 53(20).

Ferreira da Silva L, et al. (2024) A novel viral RNA detection method based on the combined use of trans-acting ribozymes and HCR-FRET analyses. *PloS one*, 19(9), e0310171.

Jung H, et al. (2024) CRISPR/dCas12a knock-down of *Acidithiobacillus ferrooxidans* electron transport chain bc1 complexes enables enhanced metal sulfide bioleaching. *The Journal of biological chemistry*, 300(9), 107703.

Liu M, et al. (2024) Fluorogenic Aptamer-Based Hybridization Chain Reaction for Signal-Amplified Imaging of Apurinic/Apyrimidinic Endonuclease 1 in Living Cells. *Biosensors*, 14(6).

Lu?inskait? E, et al. (2024) Reduced Non-Specific Binding of Super-Resolution DNA-PAINT Markers by Shielded DNA-PAINT Labeling Protocols. *Small* (Weinheim an der Bergstrasse, Germany), 20(51), e2405032.

Xu H, et al. (2024) A Universal Strategy for Enhancing the Circulating miRNAs' Detection Performance of Rolling Circle Amplification by Using a Dual-Terminal Stem-Loop Padlock. *ACS nano*, 18(1), 436.

Manghrani A, et al. (2024) Quantitative and systematic NMR measurements of sequence-dependent A-T Hoogsteen dynamics uncovers unique conformational specificity in the DNA double helix. *bioRxiv : the preprint server for biology*.

Shang Z, et al. (2024) Precise control of transmembrane current via regulating bionic lipid membrane composition. *Science advances*, 10(35), eadq0118.

Harnett J, et al. (2024) Effects of monovalent and divalent cations on the rheology of entangled DNA. *Soft matter*, 20(19), 3980.

de Araújo NS, et al. (2024) Aptamer-Based Recognition of Breast Tumor Cells: A New Era for Breast Cancer Diagnosis. *International journal of molecular sciences*, 25(2).

Gruenke PR, et al. (2024) A Branched SELEX Approach Identifies RNA Aptamers That Bind Distinct HIV-1 Capsid Structural Components. *ACS infectious diseases*, 10(8), 2637.

Shi R, et al. (2024) Programming gel automata shapes using DNA instructions. *Nature communications*, 15(1), 7773.

Zhu P, et al. (2024) A promoter-RBS library for fine-tuning gene expression in *Methanosarcina acetivorans*. *Applied and environmental microbiology*, 90(9), e0109224.