

Resource Summary Report

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SPIKE

RRID:SCR_010466

Type: Tool

Proper Citation

SPIKE (RRID:SCR_010466)

Resource Information

URL: <http://www.cs.tau.ac.il/~spike/>

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Description: Database of curated human signaling pathways with an associated interactive software tool for analysis and dynamic visualization of pathways. Individual pathway maps can be viewed and downloaded; the entire database may be browsed, or launched via a map viewer tool that allows dynamic visualization of the database and save networks in XGMML format that can be viewed in all generic XGMML viewers. Map Topics * Cell cycle progress and check points * DNA damage response * Programmed cell death related processes * Stress-activated transcription factors * Mitogen-activated protein kinase pathways * Immune response signaling * HEarSpike: hearing related pathways

Abbreviations: SPIKE

Synonyms: Signaling Pathway Integrated Knowledge Engine

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

Defining Citation: [PMID:21097778](#), [PMID:18289391](#)

Keywords: visualization, analysis, cellular, signaling pathway, regulatory network, function, genomic, proteomic, cell cycle, dna damage, cell death, stress, transcription factor, mitogen, protein kinase, pathway, immune response, signaling, hearing, dna damage response, programmed cell death, development, ear, bio.tools, FASEB list

Related Condition: Cancer

Funding: A-T Children's Project ;
Wolfson Foundation ;
European Union FP7 ;
Israel Science Foundation

Resource Name: SPIKE

Resource ID: SCR_010466

Alternate IDs: biotools:spike, nlx_157705

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

Record Creation Time: 20220129T080259+0000

Record Last Update: 20260905T133156+0000

Ratings and Alerts

No rating or validation information has been found for SPIKE.

No alerts have been found for SPIKE.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 131 mentions in open access literature.

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

Yang H, et al. (2026) Schwann cell-derived extracellular vesicles inhibit osteoclastogenesis through the PTEN/AKT axis in peripheral nerve-bone crosstalk. Journal of nanobiotechnology, 24(1), 144.

Palollathil A, et al. (2026) Integrative phosphoproteomic analysis reveals co-regulatory phosphorylation networks of rhotekin in cancer progression. Discover oncology, 17(1).

van Agthoven MA, et al. (2026) Absorption Mode Broadband 2D MS for Proteomics and Metabolomics. Journal of the American Society for Mass Spectrometry, 37(5), 1207.

Griffiths JI, et al. (2025) Blocking cancer-fibroblast mutualism inhibits proliferation of endocrine therapy resistant breast cancer. Molecular systems biology, 21(7), 825.

Zhang H, et al. (2025) scRDEN: single-cell dynamic gene rank differential expression network and robust trajectory inference. Scientific reports, 15(1), 16963.

Taub-Tabib H, et al. (2024) Identifying symptom etiologies using syntactic patterns and large language models. Scientific reports, 14(1), 16190.

Paciello I, et al. (2024) Antigenic sin and multiple breakthrough infections drive converging evolution of COVID-19 neutralizing responses. Cell reports, 43(9), 114645.

Rahman M, et al. (2024) Unveiling the intricacy of gapmer oligonucleotides through advanced tandem mass spectrometry approaches and scan accumulation for 2DMS. *The Analyst*, 149(18), 4687.

Zhou Y, et al. (2024) DDMut-PPI: predicting effects of mutations on protein-protein interactions using graph-based deep learning. *Nucleic acids research*, 52(W1), W207.

Smirnova AM, et al. (2024) Stem-loop-induced ribosome queuing in the uORF2/ATF4 overlap fine-tunes stress-induced human ATF4 translational control. *Cell reports*, 43(4), 113976.

Guelfi G, et al. (2024) Feline hypertrophic cardiomyopathy: Does the microRNA-mRNA regulatory network contribute to heart sarcomeric protein remodelling? *International journal of experimental pathology*, 105(5), 170.

Zaini PA, et al. (2024) Leveraging Walnut Somatic Embryos as a Biomanufacturing Platform for Recombinant Proteins and Metabolites. *Biotech (Basel (Switzerland))*, 13(4).

Lindsay OR, et al. (2024) Age related changes in skin sensitivity assessed with smartphone vibration testing. *Scientific reports*, 14(1), 17836.

Stancu M, et al. (2024) Ambient sound stimulation tunes axonal conduction velocity by regulating radial growth of myelin on an individual, axon-by-axon basis. *Proceedings of the National Academy of Sciences of the United States of America*, 121(11), e2316439121.

Long L, et al. (2024) Experimental and Simulation Investigation on Fatigue Performance of H13 Steel Tools in Friction Stir Welding of Aluminum Alloys. *Materials (Basel, Switzerland)*, 17(7).

Malar DS, et al. (2024) Network analysis-guided drug repurposing strategies targeting LPAR receptor in the interplay of COVID, Alzheimer's, and diabetes. *Scientific reports*, 14(1), 4328.

Simioni C, et al. (2024) Effects of SARS-COV-2 on molecules involved in vascularization and autophagy in placenta tissues. *Journal of molecular histology*, 55(5), 753.

Glangetas C, et al. (2024) A population of Insula neurons encodes for social preference only after acute social isolation in mice. *Nature communications*, 15(1), 7142.

Rosichini M, et al. (2023) SARS-CoV-2 infection of thymus induces loss of function that correlates with disease severity. *The Journal of allergy and clinical immunology*, 151(4), 911.

Batin MA, et al. (2023) WheatSpikeNet: an improved wheat spike segmentation model for accurate estimation from field imaging. *Frontiers in plant science*, 14, 1226190.