Resource Summary Report

Generated by RRID on Apr 8, 2025

ViBE-Z

RRID:SCR_005895
Type: Tool

Proper Citation

ViBE-Z (RRID:SCR_005895)

Resource Information

URL: http://vibez.informatik.uni-freiburg.de/

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Description: An imaging and image analysis framework for virtual colocalization studies in larval zebrafish brains, currently available for 72hpf, 48hpf and 96hpf old larvae. ViBE-Z contains a database with precisely aligned gene expression patterns (1????m^3 resolution), an anatomical atlas, and a software. This software creates high-quality data sets by fusing multiple confocal microscopic image stacks, and aligns these data sets to the standard larva. The ViBE-Z database and atlas are stored in HDF5 file format. They are freely available for download. ViBE-Z provides a software that automatically maps gene expression data with cellular resolution to a 3D standard larval zebrafish (Danio rerio) brain. ViBE-Z enhances the data quality through fusion and attenuation correction of multiple confocal microscope stacks per specimen and uses a fluorescent stain of cell nuclei for image registration. It automatically detects 14 predefined anatomical landmarks for aligning new data with the reference brain. ViBE-Z performs colocalization analysis in expression databases for anatomical domains or subdomains defined by any specific pattern. The ViBE-Z database, atlas and software are provided via a web interface.

Abbreviations: ViBE-Z

Synonyms: Virtual Brain Explorer for Zebrafish, Virtual Brain Explorer, ViBE-Z: The Virtual Brain Explorer for Zebrafish

Resource Type: atlas, software application, database, data or information resource, data processing software, software resource, image processing software

Defining Citation: PMID:22706672

Keywords: brain, larval zebrafish, gene expression, confocal microscopy

Funding: Excellence Initiative of the German Federal and State Governments ; European Union

Resource Name: ViBE-Z

Resource ID: SCR_005895

Alternate IDs: nlx_149465

Record Creation Time: 20220129T080233+0000

Record Last Update: 20250407T215549+0000

Ratings and Alerts

No rating or validation information has been found for ViBE-Z.

No alerts have been found for ViBE-Z.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 4 mentions in open access literature.

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

Ding Y, et al. (2019) Computational 3D histological phenotyping of whole zebrafish by X-ray histotomography. eLife, 8.

Allalou A, et al. (2017) Automated deep-phenotyping of the vertebrate brain. eLife, 6.

Maximino C, et al. (2015) Non-mammalian models in behavioral neuroscience: consequences for biological psychiatry. Frontiers in behavioral neuroscience, 9, 233.

Arrenberg AB, et al. (2013) Integrating anatomy and function for zebrafish circuit analysis. Frontiers in neural circuits, 7, 74.