Resource Summary Report

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Waxholm Space Atlas of the Sprague Dawley Rat Brain

RRID:SCR_017124
Type: Tool

Proper Citation

Waxholm Space Atlas of the Sprague Dawley Rat Brain (RRID:SCR_017124)

Resource Information

URL: http://www.nitrc.org/projects/whs-sd-atlas/

Proper Citation: Waxholm Space Atlas of the Sprague Dawley Rat Brain (RRID:SCR_017124)

Description: Open access volumetric atlas of anatomical delineations of rat brain based on structural contrast in isotropic magnetic resonance and diffusion tensor images acquired ex vivo from 80 day old male Sprague Dawley rat at Duke Center for In Vivo Microscopy. Spatial reference is provided by Waxholm Space coordinate system. Location of bregma and lambda are identified as anchors towards stereotaxic space. Application areas include localization of signal in non structural images. Atlas, MRI and DTI volumes, and diffusion tensor data are shared in NIfTI format.

Abbreviations: WHS-SD-atlas

Synonyms: WHS SD rat atlas, WHS_SD_rat_atlas, WHS-SD-rat-atlas

Resource Type: atlas, data or information resource, waxholm atlas

Defining Citation: PMID:24726336, PMID:25585022

Keywords: volumetric, atlas, anatomical, delineation, rat, brain, structural, contrast, isotropic, MIR, DTI, male, Sprague Dawley, image

Funding: EC Human Brain Project ;
NCI U24 CA092656;
NIBIB P41 EB015897;
Research Council of Norway

Availability: Free, Available for download, Freely available

Resource Name: Waxholm Space Atlas of the Sprague Dawley Rat Brain

Resource ID: SCR_017124

Record Creation Time: 20220129T080333+0000

Record Last Update: 20260905T133214+0000

Ratings and Alerts

No rating or validation information has been found for Waxholm Space Atlas of the Sprague Dawley Rat Brain.

No alerts have been found for Waxholm Space Atlas of the Sprague Dawley Rat Brain.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 38 mentions in open access literature.

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

Scheidt D, et al. (2026) Exploring the 3D architecture of brain tissue using digital holographic microscopy. Biomedical optics express, 17(3), 1293.

Schneider AM, et al. (2026) Post-recanalization administration of rapamycin improves functional outcome and reduces infarct size in a rat model of ischemic stroke. Neuroprotection (Chichester, England), 4(2), 157.

Paundralingga OT, et al. (2026) Optogenetic stimulation of the median preoptic nucleus: Effects on hypothalamic paraventricular nucleus magnocellular neurons after chronic intermittent hypoxia exposure. Journal of neuroendocrinology, 38(1), e70100.

Lou M, et al. (2026) Relationships between phenotypic differences in punishment behaviour and prefrontal cortex network engagement. Neurobiology of learning and memory, 225, 108167.

Ribeiro I, et al. (2025) Chronic stress and cytogenesis ablation disrupt hippocampal neuron connectivity, with fluoxetine restoring function with sex-specific effects. Neurobiology of stress, 37, 100743.

Giri T, et al. (2024) Oxytocin-induced birth causes sex-specific behavioral and brain connectivity changes in developing rat offspring. iScience, 27(2), 108960.

Ma X, et al. (2024) Development and advancements in rodent MRI-based brain atlases. Heliyon, 10(6), e27421.

Kleven H, et al. (2024) Comparison of basal ganglia regions across murine brain atlases using metadata models and the Waxholm Space. Scientific data, 11(1), 1036.

??vsthus M, et al. (2024) Spatially integrated cortico-subcortical tracing data for analyses of rodent brain topographical organization. Scientific data, 11(1), 1214.

Blixhavn CH, et al. (2024) The Locare workflow: representing neuroscience data locations as geometric objects in 3D brain atlases. Frontiers in neuroinformatics, 18, 1284107.

Fiorilli J, et al. (2024) Neural correlates of object identity and reward outcome in the sensory cortical-hippocampal hierarchy: coding of motivational information in perirhinal cortex. Cerebral cortex (New York, N.Y. : 1991), 34(2).

Poulain A, et al. (2023) Multi-compartmental model of glymphatic clearance of solutes in brain tissue. PloS one, 18(3), e0280501.

Dorman R, et al. (2023) Spike-based coupling between single neurons and populations across rat sensory cortices, perirhinal cortex, and hippocampus. Cerebral cortex (New York, N.Y. : 1991).

Reiten I, et al. (2023) The efferent connections of the orbitofrontal, posterior parietal, and insular cortex of the rat brain. Scientific data, 10(1), 645.

Kleven H, et al. (2023) AtOM, an ontology model to standardize use of brain atlases in tools, workflows, and data infrastructures. Scientific data, 10(1), 486.

Blixhavn CH, et al. (2023) A Timm-Nissl multiplane microscopic atlas of rat brain zincergic terminal fields and metal-containing glia. Scientific data, 10(1), 150.

Kleven H, et al. (2023) Waxholm Space atlas of the rat brain: a 3D atlas supporting data analysis and integration. Nature methods, 20(11), 1822.

Dai T, et al. (2023) Identifying reproducible resting state networks and functional connectivity alterations following chronic restraint stress in anaesthetized rats. Frontiers in neuroscience, 17, 1151525.

Razzaghi Khamesi P, et al. (2023) Are standing osmotic gradients the main driver of cerebrospinal fluid production? A computational analysis. Fluids and barriers of the CNS, 20(1), 18.

Fuglstad JG, et al. (2023) Histological E-data Registration in rodent Brain Spaces. eLife, 12.