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: waxholm atlas, data or information resource, atlas

Defining Citation: PMID:24726336, PMID:25585022

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

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

Availability: Free, Available for download, Freely available

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

Resource ID: SCR_017124

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Record Creation Time: 20220129T080333+0000

Record Last Update: 20260804T043700+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 35 mentions in open access literature.

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

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.

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.

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

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

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

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

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.

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).

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.

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.

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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.

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

Natale G, et al. (2023) Astrocyte Responses Influence Local Effects of Whole-Brain Magnetic Stimulation in Parkinsonian Rats. Movement disorders : official journal of the Movement Disorder Society, 38(12), 2173.

Kleven H, et al. (2023) A neuroscientist's guide to using murine brain atlases for efficient analysis and transparent reporting. Frontiers in neuroinformatics, 17, 1154080.

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.

Fedor BA, et al. (2022) Early, Intense Rehabilitation Fails to Improve Outcome After Intra-Striatal Hemorrhage in Rats. Neurorehabilitation and neural repair, 36(12), 788.