# Resource Summary Report

Generated by Kravitz on Sep 10, 2026

## Segmented ssTEM stack of neural tissue

RRID:SCR_007004
Type: Tool

### Proper Citation

Segmented ssTEM stack of neural tissue (RRID:SCR_007004)

### Resource Information

**URL:** http://www.ini.uzh.ch/~acardona/data.html

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**Description:** 30 sections from a serial section Transmission Electron Microscopy (ssTEM) data set of the Drosophila first instar larva ventral nerve cord (VNC). The microcube measures 2 x 2 x 1.5 microns approx., with a resolution of 4x4x50 nm/pixel. The images are representative of actual images in the real-world: there is a bit of noise; there are image registration errors; there is even a small stitching error in one section. None of these led to any difficulties in the manual labeling of each element in the image stack by an expert human neuroanatomist. A software application that aims at removing or reducing human operation must be able to cope with all these issues. Each labeled object has a unique id and fits into the overall datastructure of the data set. For example, each mitochondria is represented by a unique Arealist object, containing a list of labeled areas, one per section. All membranes have been highlighted as one unique object. All neurites (and glia) have been highlighted each as its own independent object, delimited by membrane and non-overlapping with membrane and with each other. On the other hand, mitochondria, noise and synapses overlap with membranes, neurites and glia; hence, they are offered as independent tif stacks.

**Abbreviations:** Segmented ssTEM stack of neural tissue

**Resource Type:** data or information resource, data set, image

**Defining Citation:** PMID:20957184

**Keywords:** ventral nerve cord, transmission electron microscopy, mitochondria, synapse, membrane, neurite, glia, noise, section

**Availability:** Free for the purpose of generating or testing non-commercial image segmentation software. If any scientific publications derive from the usage of this data set, You must cite as specified.

**Resource Name:** Segmented ssTEM stack of neural tissue

**Resource ID:** SCR_007004

**Alternate IDs:** nlx_151926

**Record Creation Time:** 20220129T080239+0000

**Record Last Update:** 20260905T132605+0000

## Ratings and Alerts

No rating or validation information has been found for Segmented ssTEM stack of neural tissue.

No alerts have been found for Segmented ssTEM stack of neural tissue.

## 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 Kravitz .

Rubin TN, et al. (2017) Decoding brain activity using a large-scale probabilistic functional-anatomical atlas of human cognition. PLoS computational biology, 13(10), e1005649.

Wilson R, et al. (2016) Rapid and Near Real-Time Assessments of Population Displacement Using Mobile Phone Data Following Disasters: The 2015 Nepal Earthquake. PLoS currents, 8.

Wang CW, et al. (2014) Robust image registration of biological microscopic images. Scientific reports, 4, 6050.

Vlachos I, et al. (2013) Neural system prediction and identification challenge. Frontiers in neuroinformatics, 7, 43.