

	<b>Adult</b>	<b>L4</b>	<b>Reference</b>
Series name	N2U	JSH	$\mathbb{M}^\delta, \mathbb{C}^\delta, \mathbb{G}^\delta$
# EMs	302	410	–
Volume ( $\mu\text{m}^3$ )	4051	3533	–
# Neurons	185	181	173
# Membrane contacts	5368	4861	2955
# Synaptic contacts	2349	1583	1474
# Chemical synapses	4173	2666	–
# Gap junction contacts	490	404	389
# Gap junctions	730	702	–

**Supplementary Table 1.** Summary of volumetric reconstruction and extracted reference datasets. A contact, akin to an edge on a graph, is defined by the existence of at least one connection (membrane adjacency, chemical synapse or gap junction) between two neurons. Adult and L4 data refer to complete datasets (prior to any preprocessing in this study). NB: Volume estimated from the sum of the cross-sectional areas of the segmented neurons. Reference column shows restricted datasets following pre-processing (see Methods), including  $\mathbb{M}^1$ - $\mathbb{M}^4$  for membrane adjacency, but only  $\mathbb{M}^4$  for synaptic and gap junction reference datasets (see, e.g. Figs. 2 and 4).