The first cervical dorsal root ganglia are small swellings located on the first cervical dorsal roots, proximal to where the dorsal roots join with the first cervical ventral roots. They are often absent at this level but when present are situated on the superior surface of the posterior arch of C1 (atlas), immediately lateral to the perforation of the dura by the dorsal root.

The dorsal root ganglia are formed by the cell bodies of somatic and visceral afferent neurons. Each neuron has a single short axon, which divides into a medial branch, which enters the spinal cord via the dorsal root, and a lateral branch, which passes peripherally to a sensory end organ.