# Supplementary File 5 – Molecular autonomic neuron markers

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| **Molecular marker** | **Abbreviation** | **Function** | **Expression in neurons** |
| Tyrosine hydroxylase | **TH** | Conversion of tyrosine to 3,4-di-hydroxy-phenylanine | Sympathetic neurons, embryonic enteric and parasympathetic neurons1,2, central nervous system (CNS) catecholaminergic neurons3 |
| Peripherin | **PRPH** | Type III intermediate filament | All neurons with peripheral neurites4, histaminergic neurons of the tuberomammillary nucleus5 |
| Dopamine beta-hydroxylase | **DBH** | Conversion of dopamine to noradrenaline | Sympathetic neurons, embryonic parasympathetic and enteric neurons1,2, CNS noradrenergic neurons3 |
| Achaete-scute family bHLH transcription factor 1 | **ASCL1** | Transcription factor | Sympathetic neuron precursors, parasympathetic neuron precursors, enteric neuron precursors, CNS neuron precursors6 |
| GATA binding protein 3 | **GATA3** | Transcription factor | Sympathetic neurons, cranial ganglia, CNS neurons7 |
| Paired like homeobox 2B | **PHOX2B** | Transcription factor | Sympathetic neurons, parasympathetic neurons, enteric neurons, cranial nerve ganglia, CNS noradrenergic neurons8 |
| Tubulin beta 3 class III | **TUBB3** | Beta-tubulin isotype | Pan-neuronal9 |
| Cholinergic receptor nicotinic alpha 3/beta 4 subunits | **CHRNA3/B4** | Nicotinic acetylcholine receptor subunits | Sympathetic neurons, parasympathetic neurons, enteric neurons, sensory neurons, specific CNS nuclei10 |
| Choline O-acetyltransferase | **CHAT** | Synthesis of acetylcholine from acetyl coenzyme A and choline | Parasympathetic neurons, enteric neurons, (preganglionic) spinal motor neurons, embryonic sympathetic neurons, CNS cholinergic neurons11 |
| H6 family homeobox 2/3 | **HMX2/3** | Transcription factor | Parasympathetic neurons12, enteric neurons13, CNS neurons14 |

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